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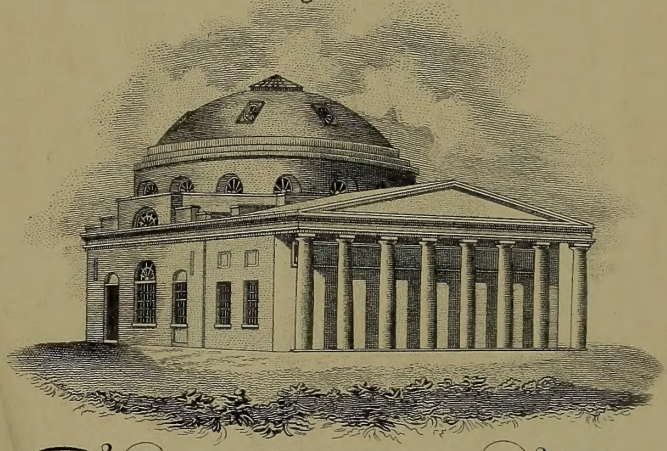

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

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An Inaugural Dissertation on Diagnosis of Hypertrophy of the Heart.

Respectfully submitted to the Examination of The Provost, Regents, and Faculty of Physic, of the University of Maryland

for the degree of

Doctor of Medicine

by

Cornelius Howard
of
Baltimore
Maryland

1848

In order to discuss this subject fully, it will be requisite, first, to consider the natural dimensions and weight of the heart; and to describe the character of the anatomical lesions connected with this particular morbid state, so that we may the better appreciate the causes requisite for the production of those external evidences, which lead us to the detection of the disease in question. We speak of Hypertrophy as a disease, but disease, properly so called, does not enter into the actual process of its formation. It is, unfortunately, almost impossible to determine with accuracy, the size, and weight of the heart; for as they vary according to age, sex, and other circumstances, there is no immutable standard of comparison which might serve as a criterion. Laennec states that the human heart in a healthy individual is about the size of his first, and although this comparison serves very well

as a popular one, yet, for medical men, some thing more exact is necessary for the proper pursuit of our investigations. It will be useless to follow in detail the numerous experiments, undertaken with a view to arrive at a correct knowledge of the size and weight of the heart, and we shall, therefore, merely give the results. Blendenning, who seems to have paid more attention to this than any one else, concludes, after examining four hundred hearts, that for the remainder of life after puberty, the weight may be assumed to average in the male, from 8½ to 9 ounces; and in the female, from 7½ to 8 ounces. After death he supposes its weight to be in relation to the individual as one is to 160, in the male, and 1 to 150 in the female. These are, probably, the most correct conclusions that we can arrive at, but there are some variations, which it is necessary to be aware of. 1st, as a general rule, the size of this organ increases as the

advance in life; and this increase is more rapid up to 29 years of age than afterwards. The exception to this is generally found in females, in some of whom the size of the heart is found to be less from 50 to 90 than from 16 to 29, but this increase in size has ~~to~~ no relation to the thickening of the walls. And 2, ~~ndly~~ In males, the size of the heart will be in proportion to the width of the shoulders. In regard to its actual measurement, we quote Bouillaud, who states as the result of his experiments, that the mean circumference at the base is from 8 to 9 inches. The mean longitudinal and transverse diameters 3½ inches, the transverse generally exceeding the longitudinal slightly. The thickness of the walls and the size of the ventricles vary in different persons according to age; and the parietes are also found to differ in different parts. On making a longitudinal section of the ventricles, they present the appearance of a truncated triangle, the greatest thickness being near the base, and

diminishing towards the apex. This difference is most perceptible in children, and becomes less so as they advance in life. The average thickness of the left ventricle in an adult is 3 7/10 lines, or nearly one third of an inch, and in the right 1 1/2 lines, or 1/8 of an inch. In the left ventricle the thickness increases with the advancing age of the individual, but with less rapidity after he reaches 50 years of age. The right differs very essentially from the left in this respect, remaining nearly stationary after puberty. We would remark, in concluding these considerations, that although we gain much in every science in point of precision and exactness, by establishing average limits as standards with which we may compare the alterations that are observed, yet we can scarcely attach the same importance to the size and weight of the heart that is done by most authors; for we know how variable these are in the same persons, under very diversified influences, and at different periods

of life. Having now discussed the size and dimensions of the heart in a healthy individual we are of course aware that any increase beyond these limits, which are appreciable to our senses, however slight it may be, constitutes Hypertrophy; and we will find on an examination of recorded cases, that this is more frequent in the left ventricle than the right, and more so in the left auricle than the right. The extent to which it may proceed is absolutely astonishing, when we consider how slight a disturbance of the circulatory apparatus is sufficient, in many cases, to produce alarming symptoms. Mention is made of a heart, found in a patient in George's Hospital, which weighed 2½ lbs; in one of Bouillaud's cases the left ventricle was so much enlarged as to contain a full sized orange, while in another it was so contracted as scarcely to admit the finger. Hypertrophy may be simple, or combined either with contraction or dilatation; and

these alterations may affect one only, or all the cavities of the organ. Hypertrophy with dilatation is the most common form, and the left ventricle its most usual seat. Hypertrophy with dilatation may exist although the wall retains its normal thickness, simply from an increased extent of surface. As two of the most important symptoms of Hypertrophy consist in an increased extent of dullness on percussion, and the greater distance to which the normal sounds are conveyed under the ear; it will be better, before going further, to understand distinctly the limits we arrive at, in our examination of the healthy organ. The apex of the heart generally pulsates between the cartilages of the fifth and sixth ribs, sometimes the fourth and fifth, at about an inch from the sternum, or, half way between the sternum and a point on a line drawn vertically from the nipple downwards. If we draw a vertical line again, through the ~~Right~~ Left

Sternocostal articulations, we will divide the heart into two unequal portions, leaving 1/3 on the right and 2/3 on the left; and, on using simple percussion, we will discover a space about ~~#~~ 1½ inches in diameter, lying between the cartilages of the fifth and sixth ribs near the Sternum, completely flat; but this dullness, as hypertrophy becomes manifest, is found to occupy a lower position, from the weight of the heart being increased and, consequently, a greater degree of tension exerted. On using auscultatory percussion (a much more certain method) we will find the dullness to occupy a space about four and a quarter inches square. The position of this dullness, will of course vary, being dependant upon the difference of position of the patient; and its extent will be modified by the greater or less thickness of the integuments. On applying our ear to the praecordial region we perceive two successive sounds, followed by an interval of repose. The first of these

sounds is dull and prolonged; is perfectly synchronous with the shock of the apex against the thoracic walls or parietes, and is at its maximum of intensity at that point where the most marked dullness of the praecordial region exists, that is about an inch above the apex of the heart. The second sound follows the first immediately, and is shorter, clearer, and more sonorous. Its maximum of intensity is found on a level with the arterial orifices, or with the lower border of the third rib near the sternum, and thence ascends along the course of the Aorta and Pulmonary artery, for the extent of two inches. Some author compares this sound with that made by the lapping of a dog; but as these sounds are peculiar to themselves, and are apt to suggest different comparisons to different individuals, we think it almost impossible for any one observer to convey to another any definite idea in this way. In regard to the

distance to which these sounds may be propagated, we may here state, that it will depend entirely on the conformation of the individual. If the parietes be thin, and the circulation active, they will be heard any where within two or three inches of the heart, and sometimes to a much greater distance; but if the cellular tissue is abundant and the circulation sluggish, it may require close attention to distinguish them clearly. Any solidification of the Lung will propagate them in the particular direction that it exists; so that Latham states, that the first physical indication of a deposition of tubercles in the summit of the right lung, before dullness or prolonged expiration is perceptible, is, that the sounds of the heart are heard more or less distinctly at the acromial end of the clavicle, while they will not be perceived a few inches below, at the same distance from the heart. Dilatation, and contraction of the heart, are

so intimately connected with Hypertrophy that we ~~could~~ should scarcely be able to treat of these affections separately; and having now gone through in detail all the necessary preliminary observations, we will speak of the symptoms of true morbid lesions, as they are found separate or conjoined. Combined in different ways in the different cavities of the heart, these alterations give rise to complex affections, which vary in frequency and may be included under the following heads, an arrangement which Hope has made, and all subsequent writers seem to have adopted.

1st. Hypertrophy with dilatation of the Left ventricle; with the same disease of the Right ventricle but less marked. 2nd. Hypertrophy with dilatation of the Left ventricle; with simple dilatation of the Right ventricle. 3rd. Simple dilatation of both ventricles. 4th. Simple Hypertrophy of the Left ventricle. 5th. Dilatation with attenuation

of Left ventricle. 6th. Hypertrophy with con=
=traction of the Left ventricle. 7th. Hypertrophy
with contraction of the Right ventricle
8th. Dilatation of the Auricles, with Hypertrophy.
9th. Simple Hypertrophy of the Auricles. 10th. Hyper=
=trophy of the Auricles, with contraction. What
we shall first say will be applicable principally
to simple Hypertrophy; afterwards we shall
point out, so far as we are able, the diagnostic
differences peculiar to the different alterations.
It is very evident that when the disease becomes
well marked, it may easily be recognized by two
or three prominent symptoms, but if our curative
means are ever available, it is during the earlier
stages, when its detection is more difficult; and
it is, therefore, necessary that we should acquire
an exact knowledge of the physiological symptoms
and sounds of the heart, in order to appreciate the
slight evidences of an incipient morbid state.
Few cases of hypertrophy of the heart continue
for any length of time, without the patient

suffering more or less from palpitation, and even in the incipiency, this will be almost the first symptom to attract his attention. By itself it is of very little importance, for in a majority of cases it much oftener depends upon some functional disturbance, than an organic lesion. Its persistancy, and its being always increased after exertion, may assist however in our diagnosis; although, in the incipient stage of the disease, it will be found to appear only when the heart has been called upon for increased activity. When hypertrophy has proceeded so far as to occasion external dropsy, and serosanguineous congestion of the Lungs, more or less dyspnoea becomes almost habitual and is then very often associated with cough. But so long as the enlargement is moderate, and there is no congestion of the Lungs, little or no difficulty of breathing is experienced. We must not, however, always trust to the patient for an acknowledgement of this symptom,

but ascertain by counting his pulse and respi=
=rations, before and after exertion, whether
they are accelerated beyond their natural
degree. Haemoptysis may occur, but it is very
infrequent, and more often evidences anal=
=teration of the valves of the right side, than
simple hypertrophy. We can easily understand
that as the disease advances, the external
appearance of the patient will give some
evidence of the altered condition of the
circulation. Its first effect, as long as the
capillary circulation continues unembarrassed
is to heighten the color, but afterwards to
diminish and change it. The original com=
=plexion, however, has a great deal to do with
this. In those who are naturally florid, the
increase in color is much more, than in those
who are pale. Connected with this we will
find affections of the head, as vertigo, tinnitus
aurium, and also we have praecordial
pain, and even serous infiltration. These

are all obviously dependant on the same cause, viz, obstructed circulation, and they are of little importance comparatively, for they are found only in advanced cases of the disease; and, in connexion ~~in~~ with the other symptoms we have already mentioned, only indicate that the heart generally is the seat of disease, without ~~indicating~~ enabling us to distinguish one of its affections from the other. We come now to those which refer us to hypertrophy more particularly. Dr. Graves found, that in several well marked cases of this disease, the pulse was not accelerated, by substituting an erect for a horizontal position, as it always is in health, and still more in all diseases of debility; the change being from 6 to 15 beats per minute in the healthy, and from 30 to 50 in the debilitated. He suggests as an explanation of this, "that the increased strength and energy of the left ventricle place its contractions,

as it were, beyond the influence of those causes, which in other diseases, attended with debility, and even in many persons in health, enable a change of posture to produce so remarkable an alteration in the frequency of the pulse." The pulse we know, bears an almost exact relation in strength, and size, to the thickness and capacity of the left ventricle, and where the hypertrophy is uncomplicated, will be a very good criterion, as to the extent to which the disease has proceeded. Thus in simple hypertrophy, it is stronger, fuller, and more tense than natural; it swells gradually and powerfully, expands largely, dwells longer under the finger, and in anæmic subjects (but no others) is sometimes accompanied by thrill or vibration. These characters are still more marked in hypertrophy with dilatation, so long as the hypertrophy is predominant; but when the dilatation

has proceeded so far, as to diminish the contractile power of the muscular fibres, the pulse, though still full and sustained, is soft and compressible. In hypertrophy with contraction of the cavity, it is tense, but small, expanding but little under the finger, and if the contraction be great, it loses its tension and becomes weak as well as small, from the insufficient quantity of blood propelled into the arteries. The strength, largeness, and tense prolongation of the pulse of hypertrophy with dilatation, are often so remarkable, that from this sign alone the practitioner may make a successful conjecture of the nature of the disease, for inflammation only can impart similar strength, and comatose affections, similar prolongation. The peculiar character of pulse, just mentioned, presents exceptions in the course of the disease. Any cause by which the heart is gorged, and rendered incapable of discharging its contents freely, produces a

small and weak pulse. Depression, or exhaus=
=tion of the nervous system, whether from the
advanced stage of the disease, or from accidental
debilitating causes of any kind, or even plethora
may produce this result. We have now arrived
at that class of symptoms, which may be con=
=sidered strictly physical; and it is by these,
and these alone, that we are enabled at the
present day, to diagnosticate between the
different lesions, affecting the heart. The
first is increased dullness, which indica=
=ting as it does, an encroachment on the lung,
either of the organ itself, or some accumulation
around it; points to one of two changes, either
hypertrophy, or pericardial effusion. It is
easy to distinguish these from one another,
as we will hereafter show. As we are supposed
to be able to recognize within very near limits
the normal size of the heart, any increase
beyond it must of course constitute hypertro=
=phy, and thus increased dullness becomes a

valuable sign. Where any doubt exists, and even in all cases, it will be better to trust to auscultatory, than to simple, percussion. In the commencement of hypertrophy, but more particularly after it is somewhat advanced, we may notice that the apex of the heart, instead of beating as it should in a healthy individual an inch and a half below the nipple, and half way between that point and the edge of the Sternum, will be found to have taken an outward and somewhat an upward directing so that in an extreme case, it may be found horizontally above the nipple, and 2 or 3 inches to the left of it. The cause of this is evident enough. When the heart commences to enlarge it will of course take that direction which offers the least resistance, and as the diaphragm presents a powerfull obstruction to its going downwards, it assumes a horizontal position, of which the apex is the extreme point. This is perhaps the most important symptom of

hypertrophy that we possess, and may be considered almost pathognomonic. It is a little strange that this should have been so long overlooked; We find no mention of it by Hope, but it is particularly insisted upon by Dr. Swett of N. York. The next symptom, in order, is the increased impulse. Hope thinks that the best way to estimate the amount of this, is by the use of the stethoscope, as slight cases are not perceptible, by the application of the ear immediately to the chest. This increased impulse is only to be ascertained by comparison, and taking different conditions into consideration. The same degree of intensity of sound, may constitute increased impulse in one case, while it will be only normal in another; and this will depend principally upon the difference in the activity of the circulation, and the thickness of the integuments. In the existance however of this symptom, our decision must be regulated ~~by~~ more by the alteration of the

character of the sound, than its intensity. Instead of its conveying to the ear the sensation of a simple, decided shock, we perceive that it has a kind of heaving motion, which takes place with a gradual progression; "it seems as though the heart swelled and applied itself to the parietes of the chest, at first by a single point, and then by its whole surface and finally sank back in a sudden manner." This sinking back, more particularly attracted Hope's attention, and he has given to it the name of back stroke, or diastolic impulse, which is occasioned he says, "by the diastole of the ventricles, during which action the heart sinks back from the walls of the chest, and this sinking back terminates in a jog, or shock, occasioned by the refilling of the ventricles, and constituting the diastolic impulse in question." The intensity of this is dependant on the amount of hypertrophy, and is greatest in hypertrophy with dilatation

It is not heard in a healthy organ, nor in simple dilatation. By this increased impulse, we are enabled to distinguish, whether the greater extent of dullness ~~is~~ over the praecordial region is dependant upon hypertrophy or effusion, for in the latter, it is almost, if not entirely wanting. This disease has the effect of deadening the sounds of the heart. Where it occurs as simple hypertrophy, the first sound is duller and more prolonged than natural; and when it exists to a very great degree, this sound becomes nearly extinct. Hope says it may always be heard, however extreme the case, by placing the Stethoscope over the Apex of the heart. The second sound is very feeble, and as is the case with the first, is heard with difficulty in extreme cases. The interval of repose will be found shorter than natural, in consequence of the lengthening of the first sound. Each

sound of the heart, though essentially one, consists of the sounds of the two sides united. It does not follow, therefore, that when one ventricle only is hypertrophied, the sounds in general, should be very limited in their range; for those of the other ventricle will be heard over an extent, proportioned to their intensity, though not quite so far as when strengthened by their fellows. Accordingly, if the sounds are con- to very narrow limits, we should be led to expect hypertrophy of both ventricles. This is all we can say of the symptoms of hypertrophy generally. The different species that we enumerated previously, as being found to exist, are mostly only discoverable by a post mortem examination; and although they doubtless give indications to us, of their existance during life, still, as yet we are unable to appreciate them perfectly, and can only draw general conclusions as to the

particular cavity, and the particular form of alteration that has taken place; and we will find moreover that our diagnosis is made almost entirely from some peculiar change, that the first or second sound has undergone. Latham, in the first part of his work on the heart, has the following paragraph, which conveys a great deal, though roughly expressed. "A clearer sound than natural, proceeds from a thin heart, and a duller sound from a thick heart; a sound of greater extent from a large heart, and a sound of less extent from a small heart; a more forcible impulse is given by a thick heart, and a feebler impulse by a thin one; this impulse is conveyed to a longer distance from a large heart, and to a shorter distance from a small heart." And this in reality expresses nearly all that is known. There are, however, some alterations of the sounds, and some other symptoms, which will assist us in our diagnosis, and which

It is necessary for us to be acquainted with
On the first place, there exist no general
signs, by which we can distinguish en-
largement or diminution of the Auricles,
from the Ventricles; but hypertrophy of the
right ventricle may be distinguished from
that of the left, by the absence of the large,
strong pulse; and being accompanied by swel-
ling and pulsation of the Jugular veins,
synchronous with that of the arteries. This
last symptom is not always the result
of regurgitation through the Mitral
valve, as Bouillaud thought, for it is of-
tener found to depend on hypertrophy with
dilatation of the right ventricle. On
hypertrophy with dilatation, the sounds
are a compound of those of hypertrophy and
those of dilatation. Both sounds of the heart
are exceedingly increased, so that they are
louder than in any other disease. It did
not escape Laennec's notice, that this form

of enlargement was sometimes attended with a bellows murmur; but he offered no explanation of it. It would seem that, in all cases, this sound would depend on regurgitation through the auriculoventricular orifices; produced either by previous disease, or by enlargement of the orifices from ventricular dilatation. But Hope says it is restricted entirely to those cases in which there is aenemia, a condition very apt to supervene in the advanced stages of organic disease of the heart; and he also thinks, that the changed form of the ventricle probably cooperates in the production of the murmur; the cavity being more spherical than natural, and the artery in consequence rising more abruptly with respect to its internal surface, the currents of blood reflected from its sides, meet in the orifice in more obtuse angles, and thus by their collision, not

only give rise to the murmur, but impede each others passage into the vessel. For the latter reason, the pulse is sometimes small and weak, when the impulse of the heart is violent. When there is simple dilatation, or dilatation with attenuation, the impulse is diminished, often to the extent of being imperceptible. When perceptible, it is a sudden, brief blow, which communicates a shock, or vibration to the thoracic walls, but has not the power to elevate them. And the reason for this is, that a thin muscle has less power, but greater rapidity of motion than a thick one. The first sound, under these circumstances, becomes loud, brief and clear; ~~while~~ like the second; and if the attenuation be very great it becomes merely a feeble click, which Hope thinks is produced by valvular extension alone. The second sound is more or less increased, "as the thin ventricle, from having greater facility of

motion, performs the diastole, as well as the systole, with greater velocity; whence the recoil of the sigmoid valves is more sudden." We are told that in cases, where there is hypertrophy with contraction, the sounds are exceedingly feeble, and often irregular. But before endeavoring to make out the diagnosis of this form, we ought to be perfectly certain that it has a real existance, and this is more than doubtfull. Cruveilhier found that nearly all the hearts, of those who were guillotined, and who were examined after death, immediately, had the appearance of this form of disease, and Dr. Budd met with it in many instances of sudden death by cholera, "but after maceration, the cavity of the ventricle which before would not contain an almond, became of its natural capacity. Still, however, there is no doubt that during life the cavities of the heart do

suffer diminution of their natural capacity, but not nearly as frequently as some have supposed. In regard to the changes in the auricles, auscultation so far as we know, conveys no direct intelli=
=gence. We are left to conjecture their condition, from other and indirect signs, and principally from the previously ascertained state of the ventricles. It seems to be pretty well established now, that hypertrophy of the heart never occurs, as an idiopathic affection; and that instead of producing valvular disease, by enlargement of the cavities and their arterial orifices, it is always a sequent of them, when they are coincident. In a great many instances we will be able to trace the history of the case back, and find, that at some previous time, the patient suffered with symptoms clearly referable to an inflammatory attack,

or mechanical lesion of the heart. But in others, either because they belong to that class of society, who only take note of their sensations when they are obliged to do so from their intensity; or, in those where the disease has been so slight as not to attract their attention; we will find that there is no starting point to mark the commencement of the Alteration. But even in these cases we may conclude that the hypertrophy did not commence, as an idiopathic disease. Hope states that the disease is almost always curable, if the patient is under 40 years of age; but according to the views of late observers, he is greatly mistaken, and it will be found, in every case, to be absolutely incurable. The symptoms may be mitigated, and life prolonged, but the disease never disappears. There are however a great many cases

which simulate closely hypertrophy of the heart, and are often treated as such, and for this reason a close attention to diagnosis is necessary, to distinguish between the two, for these latter are perfectly curable, or at least often get well. We will find the impulse is greatly increased, there is praecordial pain, a sense of fullness about the head and distressing palpitations. But the size of the heart will be found natural, and the sounds will neither be muffled, obtuse or indistinct. It is difficult to say in what the pathology of many of these cases of mock hypertrophy consists. But it seems that young persons at the prime of life are peculiarly subject to it. They are usually plethoric and often sedentary, and cannot refer the origin of their complaint to any particular period, or any particular exciting cause. In those, the increased action of the heart is owing to rich and redundant blood, and by using

a little depletion and active exercise, they may soon be relieved. There are others again, who are pale and thin, very sensitive, and inactive from nervousness and debility. No one thing produces this disordered action, but the stomach, the nervous system, and the circulation, have all, probably, their share in bringing about this simulated hypertrophy. They are not easy cases to cure, but still they are curable. There are a third set, again, of young persons who are neither florid or pale, who have no complaint that you can make out except an inordinate impulse of the heart, although the praecordial region is resonant on percussion, and the sounds of the heart are loud and clear. These, according to Latham, are the most difficult of all to treat, but nevertheless, they do, in some instances, get well. It remains now, to speak only of the diagnosis of hypertrophy from the other diseases of

the heart. It is distinguished from pericar=
=ditis by the nature of the dullness, the force and energy of the contractions, the absence of the rubbing sounds, and the general symptoms which belong to the disease, from endocarditis, by the increased extent of dullness, absence of the murmurs, and the usual sympathetic phenomena. We know of no other diseases with which it is likely to be confounded.

Cornelius Howard.

An
Inaugural Dissertation
on the
Causes of Disease
Submitted to the Examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor in Medicine
by
James J. Mackie, A. B.
of
Baltimore
Md.

Dedication.

This Essay
is Dedicated to
Doctor Henry Willis Bagley.
a Physician - a Scholar - a Friend
eminently worthy
of a
far more exalted Tribute
than this
Inscription
by his
Grateful Pupil.

The duty devolving upon the candidate for the degree of Doctor in Medicine, requiring him to present a Thesis upon some Medical subject is one of no small moment, if faithfully performed. A compilation upon some special disease is a light task, and the developement and support of some novel and startling theory is, to a ready writer and acute reasoner, not more burdensome; but a compilation may hardly be regarded as synonymous with thesis - nor is a theory unsupported by the results of close observation, and indisputable fact of any more practical importance or application than the dry bones of a skeleton without the connections and sympathies of the soft parts with which they are in relation. Besides these, there seem to be but two modes to which a writer may resort in preparing his

medical essay - one of these is when the author has had many opportunities either in hospitals or elsewhere of studying disease and the application and action of remedies, - and the other is, - when the student may have made any subject the basis of much thought and observation. It is from the latter source that I shall endeavour to derive the remarks I shall offer, upon a subject which is a fruitful theme for a more able pen.

Volumes might be written, and, if they were afterwards read, written to much purpose upon the Causes of Disease. The field is so ample, its soil so prolific, and its productions so various and diversified, that the ardent and observing student of nature may find therein ample occupation for a lifetime's toil. With how much deference and modesty, then, does it become the novice to express his observations to those who have labored for years in this field; - and shall he not rather mention only the manifest and visible productions than descend to the minute and less appreci-

ciable elements which thought at first not so appa-
rent are not less important when the young laborer
acquires sufficient experience to enable him to
prosecute his investigations with discrimination?

The principal Causes of disease that I recollect
having seen in different Authors have been various
ly classified as - "general and local" - "mechanical
and physiological" - "proximate and remote" - "pre-
disposing and exciting"; and there may be still
others, but not having access to a work upon
Etiology, I cannot mention them.

Williams, in his work upon "General Pathology"
adopts the last general classification mentioned above,
as the most useful and convenient arrangement;
he then subdivides the Exciting Causes into Cogniza
ble and non-cognizable agents; among the former
of these he mentions with others: Chemical poisons
and Mental emotions. Were it not for this I should
be much inclined to follow an Author from whose
work I have derived so much benefit. That my ob-

jections to this classification may be better understood I annex his tabular synopsis.

"Exciting causes"

I. Cognizable agents. —	II. Non Cognizable agt.
1. Mechanical,	1. Endemic,
2. Chemical,	2. Epidemic,
3. Ingesta,	3. Infectious poisons.
4. Bodily exertion,	
5. Mental emotion,	
6. Suppressed or defective evacuation.	
7. Excessive evacuation,	
8. Temperature and Changes.	

Now, if by <u>Chemical</u> causes our author mean chemical decompositions having their seat in the alimentary canal, and producing disease by the presence of foreign and irritating matter, it appears to me that this class might with propriety be embraced under the succeeding head (3. Ingesta.) But if he refer to chemical transformations in the tissues and materiel of the system, of which we are a-

cure but cannot explain them I think that the chemical causes should have been classed with the non cognizable agents.

As regards the position given to Mental Emotion I would be disposed to reject it also from its present relation and place it under the second class. Now although there is no doubt as to the immense influence which this agent exerts over the physical system, yet to make a cognizable agent of it because, as Dr. Williams says, "we are conscious of it" seems to be analogous to the argument adduced by the good man to the sceptic, to prove the existence of the soul. The infidel believed in the existence of soul although he had never seen, or felt, or tasted or smelled one - he had only heard it - therefore although he had never seen or smelled or tasted or heard his soul, but had only felt it - he was told he certainly must have one. The actual rationale of this mental influence is certainly more mysterious than the operations of any other class of causes, and tho' at first glance

it may appear easily susceptible of explanation, yet to one who has made the philosophy of the mind his study as well as the physiology of the body, I think the subject must be forever shrouded in darkness and mystery.

The method which will best enable me to express my views upon the subject I have chosen, and the plan which seems at once to combine the advantages of comprehensiveness and perspicuity is the following. The causes of disease will be arranged under two general heads - First. Intrinsic or Personal. Second, Extrinsic or Accidental; these shall be subdivided as follows; -

I. Intrinsic, or Personal	II. Extrinsic, or Accidental.
1. Peculiar Habits.	1. Atmospheric.
2. Ingesta.	2. Epidemic.
3. Mental Emotion	3. Infectious.

In speaking of the Peculiar Habits that either predispose or excite to disease, (though it may be proper to remark, that in the arrangement I have made

I shall not deem it necessary to refer distinctly to predisposing and exciting causes; it is my intention to allude to those which act universally, holding in reserve the privilege of specifying some that are peculiar to age, sex etc. if time allow. And as I regard the Peculiar Habits of individuals the most numerous by far of all the classes of disease, so do I believe that,

a. A neglect of Cleanliness - is the most prolific monster of his class. The skin and the mucous membranes of the alimentary tube enjoy the most intimate sympathies, not only with each other, but with the whole animal economy; indeed they are mere modifications of each other, differing only in the peculiar adaptation of each for its own service: and of those who are diseased and those whose province it is to afford relief how few are there whose whole attention is not directed to the internal membrane, to the utter exclusion of the external one. And yet if a preference were to be made as to the

comparative importance of these two in the promotion of health and the production of disease I should confer the pre-eminence upon the skin. The function of the decarbonization and oxygenation of the blood is very materially aided by the skin, and thus it is subservient to the lungs in the important office of respiration. If then the carbonaceous particles which are constantly being eliminated by the blood, as it circulates in the capillaries, be allowed to deposit themselves upon the surface of the body, the access of the oxygen to the blood, through the skin, (which, we are now told, is the manner in which the carbonic acid of respiration is formed,) is as effectually debarred as though the body were covered with a thick coating of varnish. What then is the consequence? This foreign matter - these effete particles, must be reabsorbed into the blood, again carried into the circulation, again struggle for escape again to be disappointed, and thus failing in its efforts it must find its outlet by the

internal organs – these are thus called upon to perform a greater amount of labor than nature intended, and though for a long time they will sustain the additional task imposed upon them, they at length become exhausted by the effort and are liable to disease, either from debility superinduced by an unnatural amount of labour, or by the irritation caused by the influx of deleterious substances, or perhaps from both of these causes. Thus I account for many of the diseases of the thoracic and abdominal organs, and I incline strongly to believe that this may yet be found to be one cause of tubercular deposit in the lungs. Though I have never seen or heard this suggestion, I think it not unworthy of further investigation. Regarding as I do a well cleansed exterior as paramount to all other hygienic modes of prophylaxis I am not disposed to doubt the wonderful cures reported by the Hydrotherapeutic disciples; My wonder is that so many thousands will suffer from maladies of the most disturbing nature

when they might have insured to themselves health and so far as its blessings extend, happiness by the use of a wet sponge and coarse towel upon rising in the morning.

The next cause in this class of which I shall speak is,

5. Insufficient or improper clothing. This like the preceding cause is of universal application either when poverty or fashion wields its iron sceptre; the poor being clad insufficiently, the rich improperly. The constantly varying atmospheric phenomena which we experience, of course stimulate or depress the system in different degrees. If the body be sufficiently protected against cold and the temperature of the air be much equated, the same protection as before becomes unnecessary and if retained acts as a stimulant to a healthy constitution and becomes an irritant and thus an exciting cause of disease. The reverse is the case when cold supervenes upon warmth, that is - we have a sedative and not a stimulant

impression; and yet I believe it is a great error and one into which we are liable to fall, I mean that of protecting the body too much. The healthy system is capable of generating a sufficient quantity of caloric for its own support, and if this supply be furnished either wholly or in part from some foreign source, the vital machinery becomes embarrassed, its motions retarded and carried on irregularly and disordered action is the inevitable consequence: It is in young and healthy persons whose organic forces are being rapidly developed; that warm and heavy clothing is not only useless but harmful; for the transpiration would be too abundant for the young and thus by determining too great a quantity of the nutritious juices towards the surface would prevent the proper development of the internal organs. But on the other hand in debilitated or aged persons warm clothing becomes requisite, for in the first of these classes the living fibre becomes relaxed, and consequently is far more sensi-

tive to external impressions thus requiring additional protection; and in the second class, the external organs have become contracted and compact, the internal supply of stimulus is materially diminished and we must aid the defective operations of the system by artificial appliances. In speaking of the effect of improper clothing as a cause of disease I cannot but allude to the pernicious and fatal custom common among females, that of compressing the body by means of stays, and it is to their destructive agency undoubtedly that we may refer nine tenths of all the pulmonary and uterine diseases that occur. The thoracic organs being prevented in their expansive movements become either hepatized or tubercular, while the abdomen being forcibly constrained endeavors to expel its viscera. These crowded contents cannot escape upwards for the cavity of the chest is packed as closely as can be effected by mechanical violence, the necessary consequence is their compression into

the pelvis and consequent attempt at escape by any outlet afforded them. So far as I have had opportunity for observation I have found uterine diseases far more frequent among colored women than white females of the same rank in life, and this I attribute to the greater vanity displayed by the former in their silly desire to procure and show what they consider a handsome waist. Having thus very hastily touched only the outline of a particular from which a whole essay might be deduced, I would next say a few words upon

c. <u>Occupation</u>. This as a cause of disease is obvious even to the unprofessional, and may exert its influence either by disordering and vitiating the organic functions or by absolutely shortening life. The effect of sedentary habits in inducing sluggishness and torpor of the digestive system, and thence by sympathy in affecting the nervous apparatus, is evident. if we observe the peculiar forms of disease to which those who are occupied in confining pursuits are li-

able. The attitude of tailors and shoemakers is in the highest degree unfavorable to a proper and natural exercise of the respiratory function; this connected with the vitiated atmosphere which such persons are obliged to inhale leaves the stamp of disease upon them which is easily recognized. Men who are compelled to earn their scanty dollar by hard and constant toil in the fields and streets are the subjects of catarrhs, rheumatisms, fevers and inflammatory diseases. Those who at intervals make strong and sudden efforts in lifting or raising heavy burdens as draymen, porters etc. have hemmorhages, hernias, and neuralgias. Miners, gilders and workers on some of the metals are short lived and diseased even during their brief existence. They who live in an atmosphere filled with minute particles of foreign substances suffer from bronchitis, asthma and other afflictions of the air passages. It has been asserted that the grinders of instruments in Sheffield were short lived because of the

inhalation of the minute atoms of steel dust thrown off during the grinding, thereby occasioning pulmonary diseases; and these ill consequences were said to be averted by having the workmen wear magnetized masks. Dr. Armstrong however denies that the inhalations were the cause of their diseases, and asserts, that when the artizans were obliged to stand at their work they found immunity from farther attacks. It would be an almost endless task were one to attempt to specify the innumerable means by which occupation induces disease. The whole array of formidable maladies falling under this head are referrible to one of these two final causes - either man's injustice to himself, or, his injustice to his fellow creature The poor man is inadequately remunerated for his toil, and has no alternative but to die by the insidious progress of disease, or by the more speedy but not more certain effects of starvation. We have a sad illustration of the disregard of the em-

ploye for his servants, now in the Infirmary, in the case of the poor fellow who was blown up, while ramming down his charge of powder with an iron rod instead of a copper one which should have been furnished him. The certain loss of one eye may be considered a cheap ransom for his life; the suffering and distress of a mother and sisters will be extravagantly remunerated perhaps by the munificence of a five dollar bill from the generous employer, "who, as one Professor of Surgery remarked with just indignation, "would risk the lives of his workmen as a matter of no moment compared with the gain of a few cents realized in the purchase of iron instead of copper." Verily, "Homo lupus homini."

These Evils are irremediable:- the physician may point out the diseases which beset certain occupations and habits until his warnings are heard in every hovel and workshop in the land; and yet, until his efforts are so seconded by

the philanthropist and political economist as to procure for the laborer the hire of which he is worthy, our duty will be the noble one of alleviating so far as we may the miseries inflicted by the avarice and oppression of others.

Having thus mentioned and barely mentioned three of the most prominent causes of disease falling under the first subdivision of Intrinsic causes, it is my purpose to allude to the second head of the same class, which is

2. Ingesta. By this term I mean whatever is taken into the stomach, whether solid or liquid, intended to answer the purposes of nutrition and aliment; this nutrition being a certain assimilating process which subjects the ingesta to a ~~certain~~ degree of fermentation or alteration which is easy or difficult as these substances are more or less allied to animal nature. "Hippocrates and Galen regarded water and heat as the essential conditions of aliments, and thought that every sub-

stance possessing these qualities changed the state of the body and was either a medicament or a poison and differed only relatively, in that the essential character of aliment was changed without causing any alteration in the animal economy, when correctly proportioned to the wants of the animal".

The ancients knew only of the simple and unprepared aliments which were furnished them by nature; and this simplicity of food was doubtless the chief cause of that exemption from disease which they enjoyed; gradually however comforts were added to necessities, luxuries to comforts, and dainties to luxuries; and with each contribution to pleasure came another visitor from Pandora's box. The simple aliment of man in the golden age is beautifully described by Ovid in his lines -

"Contentique cibis nullo cogente creatis,
"Arbuteos fœtus, montanaque fraga legebant;
"Cornaque et in duris hærentia mora rubetis,
"Et quæ deciderant patulâ Jovis arbore glandes".

Plutarch says - that "it is sufficient to taste of true pleasure to be temperate", and we may certainly accept of this as an axiom, for intemperance ruins the health and that being destroyed what can excite true enjoyment? We are told that Alexander on a march sent back all his cooks, saying, that he carried an excellent one with him - a long march to give him a good appetite. It is an undoubted fact that a vast number of persons either die prematurely or drag out a miserable existence from their habitual devotion to the pleasures of the appetite, while on the other hand they who are content with a simple fare enjoy immunity from disease and a long life.

That any particular province of nature should be exclusively laid under contribution to furnish sustenance to man is fully proved by the observations and experiments of physiologists. Pythagoras, Plutarch, Rousseau, and with such names shall I mention

that of Graham have successively advocated the purpose of Nature that man should derive his sustenance only from the vegetable kingdom. But this assertion is clearly disproved by man's instincts, his appetites, and the fact that the anatomical peculiarities of his organs of mastication and digestion being perfectly analogous in many respects both to animals wholly on flesh and those whose nutriment is derived solely from the vegetable kingdom.

Ingesta may vitiate or disorder the system by acting in one of three ways - (a) Mechanically - (b) Vitally - (c) Chemically.

a. Mechanically. When substances in undue quantities are taken into the stomach they create a fulness of that organ which becomes distended, its nerves in some measure paralyzed by pressure the brain sympathises and the patient falls into a state of lassitude and even of partial torpor; is indisposed to exertion, and finds no

relief till some portion of the burden is thrown off. When this is done the muscular fibres of the organ are relaxed in proportion to their previous distension, and have not time to recover their tone before they are called upon to perform another task. Thus the peristaltic function is impaired, the gastric secretions do not act upon the inordinate quantity of material which is subjected to them, a great portion of these ingesta is thrown into the alimentary canal in their crude state, and the internal membranes unprepared for and unused to the presence of foreign matter, become irritated, inflamed and diseased. And unless the habit of indulgence be soon checked, this torpid and irritated condition of the primae viae becomes itself a habit, which perhaps neither skill nor time can correct. The presence of tineæ, ascarides etc. in the intestines, I attribute in a great measure to the mechanical introduction of animalculae which though imperceptible are always present in

water, which being introduced into the stomach and intestines furnishes its invisible inhabitants or their ova to be deposited in the many folds of the mucous membrane, which offer them such convenient resting-places.

(B) Vitally. In his subdivision of Ingesta, Williams says that they act in one of three ways - 1. By nonalimentary matter acting injuriously. 2. By defective supply - 3. By excessive supply. All of these means, I think naturally fall under my division of vital action, and might be fully and clearly illustrated under their several heads. For instance, under the first division we might include all those substances which by the rich are used as condiments, yet containing no nutrition; and besides there are many kinds of food which the poor frequently eat merely to gratify the cravings of hunger, and yet derive no nourishment from them. In the second class - that of defective supply - we would embrace those instances of hard working people, who by their la-

bor creates a demand for nutritious which is not supplied; and in the last place - Excessive supply, we class those who lead a sedentary and inactive life, yet indulge in a quantity of aliment for which there is no demand.

Articles of food injure vitally or physiologically by their effect upon the blood into which they pass after undergoing certain changes. We know that a diet composed of an excess of fatty matter produces an inordinate quantity of bile and, on the other hand a vegetable farce is likely to occasion acidity of the stomach. Aliment, may produce an excess of red particles in blood perhaps already too rich; or they may be defective in that element and hence fail to afford that vivifying principle to the blood upon which its calorific agency has been supposed to depend. This subject is one of the most interesting ~~on~~ connected with the study of disease and I doubt not but that when it has more fully attracted the

close investigation of the profession which it deserves we shall be the better enabled to understand the elements and treatment of disease.

(c) Chemical. It would be perhaps a difficult task to undertake to draw a strict line of demarcation between vital and chemical actions. From the known action known of chemical agents out of the body upon animal organization, we know that a great influence is in this way exerted upon the animal economy. Yet I would hesitate before I followed implicitly the light shed by that star in the sky of modern chemical science - I mean Baron Liebig - who would reduce most of the changes and transformations in the body to certain chemical combinations and decompositions - thus rendering vital action secondary to chemical; in fact making the human system nothing more than a peripatetic laboratory. This is the case to a limited extent only, thus the inorganic deposits from the urine in the bladder are

dissolved and their further developement neutralized by chemical remedies acting through the medium of the blood. The agency of alkalies in fevers of a low and typhoid type is undoubtedly chemical, and perhaps the chemical treatment of disease would be the rational one in most conditions arising from a morbid state of the blood; but in nervous and respiratory affections we would in vain seek assistance in its mysterious workings.

This brings me to the consideration of the last branch of this division of my subject - that is

3. Mental Emotion. I would that myself were competent to so exalted a theme! Shall I venture to explain the mystical bond which unites the body and the spirit? Shall I attempt to trace the chain which links the earthly and the heavenly? Shall I tell how the breathings of man's soul sweep over the chords of his heart and awaken there the glad music of hope, giving new impulse to life, or the wild tones of despair which chills his

blood in death? Vain presumption! A dark cloud of mystery overhangs the contemplation of the subject and the inefficable union is never understood till the moment when death severs the tie which binds together the essential and the material.

History illustrates this influence by many examples. When Diagoras heard of the success of his three sons in the Olympic games he died of joy. So Sophocles when he received a wreath which he did not expect. All of the emotions and passions of the mind whether pleasurable or painful have the same powerful influence. Hope invigorates and exalts the action of the system; Fear is a sedative of the most powerful nature; Grief and anxiety destroy the appetite and contribute to produce disease. Dr. Armstrong says, that he knew a case of inflammation of the lungs brought on by a thunder storm; many persons when absent from home are constantly sick; in illustration of this

we read of a number of Icelanders who were violently taken from their homes, pined a few months and all died. Dr Rush relates a beautiful incident showing fully this mental influence. When young he used to be accustomed to walk about the neighborhood in company with a young female friend - they were very fond of visiting a wild spot where an eagle had her eyry, and here they spent many hours in the contemplation of nature's beauty.— They parted, time ran on and the young boy became a Physician of Philadelphia, and in his professional capacity was called to see an apparently dying woman. In his patient he recognized the companion of his youthful days. Taking her almost lifeless hand he uttered the words "the eagle's nest" The words, the voice, the associations thrilled with such wild effect that she was aroused to new life and health.

Anger; one of the strongest passions of which the mind is susceptible, manifests its terrific power on

every lineament of the frame; the circulation is hurried, the blood tends to the brain, the respiration becomes frequent and oppressed, the muscles spasmodically contract, and the subject of it is an evidence of the truth of the ancient saying, "ira est brevis furor"; in this condition the vessels are often ruptured and the brain particularly rendered liable to disease.

Fear is another passion which operates powerfully on the system, under its influence the heart throbs with violence, the blood is derived from the surface and becomes congested in the internal organs and weakness, prostration and relaxation result. I believe that fear in a very remarkable degree renders the body susceptible of contagious poisons. Small pox patients have frequently told me that they had distinctly perceived the moment when the disease laid hold of them, tho' they were in a state of perfect health; this I do not doubt, but would account for it by supposing that, at the instant, some violent emotion of fear so debilitated the moral and

physical powers, that the disease, before unable to make any impression, finding the defences thrown down before it readily enters the system and sets up its terrific reign.

Love, a passion compounded of so many conflicting elements, produces upon the animal economy different effects and these in a greater or less degree as any one of its constituent emotions may predominate. Men are ennobled and exalted under its pure influence and avoid all of those vices and follies which are the fruitful source of disease to others who are unprotected by this agis. But disappointed and despairing subjects of this passion become reckless and prodigal of life and its energies, the mind sinks in despondency, and both body and mind become a wreck of former grandeur.

I have alluded to the more prominent of the passions affecting man's life and health, because they embrace all of those mental operations of a more undefined nature that we term emo-

tions. Hastily have I inscribed a few observations upon a subject eminently worthy of constant study; I must acknowledge my great faith in the medicine for the mind; the kind word - the sympathising glance will often do more to heal those crushed to kindness than all of the apothecary's drugs. It is our duty as it is our pleasure to minister to the mind diseased, to befriend the friendless, and to smooth, so far as we may the sad and rough path of life to those whose hearts are the homes of sorrow.

The Second general class of causes presented for consideration are those falling under the head of Extrinsic or Accidental. I have chosen to call them by the name extrinsic because their influence is at first exerted from without - they are causes residing elsewhere than in the person subjected to their morbific operations. The first of these - atmospheric is certainly extrinsic, tho' perhaps the term accidental is hardly so applicable, inasmuch as its influence is universal; I have preferred the terms

I have employed however, as less exceptionable in this application to the subjects they embrace, than any exclusive one I could have adopted.

1. Atmospheric. The stimulus upon which the vital functions depend for their support, is the atmosphere, hence it must be obvious, that, in proportion as this element is fitted or otherwise for the duty required of it, in like measure will be its healthful or pernicious effect upon the system. It is not only with reference to its chemical qualities that we shall consider this subject but also with regard to its physical properties of heat, cold, dryness and moisture.

(1) The chemical constituents of the atmosphere nitrogen and oxygen are invariable in their proportions, preserving their relative ratio whether the analysis be made with air brought from the highest mountains or taken from the deepest gorges. Carbonic acid gas however, with sulphuretted hydrogen, is present in greater or less abundance

the former being the result of animal respiration and the decomposition of plants, while the latter results from the putrefaction of animal and vegetable matter. These gases being in the highest degree poisonous to animal life, from what ever causes any increase in their proportions may arise we must have an increase of disease. Animal respiration is combustion, it decomposes and alters the constitution of the atmosphere by taking away its oxygen, and this being accomplished, the remaining elements of the air will no longer serve the purposes of animal respiration. Wherever then we find large numbers of men crowded together we must have oxygen abstracted from the atmosphere much more rapidly than it is supplied, carbonic acid takes its place, and a contaminating and foul miasma arises, which joined with the vitiated exhalations from the bodies produces enervation and debility, tending powerfully to the destruction of life and the propagation of disease. The same

deleterious condition of the atmosphere exists in those confined and filthy streets and hovels, where the poor cluster together in their misery and filth the atmosphere becomes impregnated with noxious and effete matter, and the solar light has not any material upon which it can act for the generation of the oxygen necessary for healthful action of vitality. the calorifying power of the air being so interrupted that the body sinks as effectually, tho' not so speedily perhaps, as if under the influence of a sedative poison. I have often wondered why an institution under such libral and intelligent management as the Baltimore Alms House should be so illy provided with the proper means of ventilation. In cold weather pure air cannot have access to its wards unless admitted in a direct stream through the windows – an undesirable method of ventilating the apartments of the sick; to a person entering the wards from the fresh air, the effluvia is almost insupportable, how much less

fitted thus, must such an atmosphere be for the support of the weak and debilitated organs of the diseased; unchanged as it is with carbonic acid and destitute of its necessary quantity of oxygen. In this connection I cannot but allude to the immense influence which light possesses over the human frame, doubtless as much as upon the vegetable system which growing in a spot from which the light is excluded, becomes white, weak and watery, deficient in fibre and strength, and wholly unlike its species. The method adopted in the European Hospitals, of wheeling the beds of their patients out upon a balcony exposed to the action of light and to the peculiar electrical condition of the air, which end could never be attained by keeping patients confined within hospital wards, is, in my opinion, a practise of the highest utility. A very common illustration of the effect of light upon animal life and enjoyment is found in the universal fact that upon a dark or rainy

day, ninty nine persons out of an hundred become gloomy and morose; if on a clear day the sky becomes overcast, birds and all creatures used to utter joyous sounds become mute and quiet. The English nation, enveloped in their constant and impenetrable fogs, is another instance of the chilling effects of darkness - for an Englishman is proverbially a surly being.

(2) The first Physical property which we regard in the atmosphere is

a. Heat. This agent promotes health or induces disease as it varies in degree and intensity, to a certain extent it is necessary to the proper action of the vital functions, beyond this it acts as an irritant and excites inflammation, and if carried still further it coagulates the albumen and occasions the death of the parts. Heat has the property of expanding the solids and evaporating the liquids by its expulsive force, by means of which it separates the particles of a

body and diminishes their attractive force, it dries up animal substances by depriving them of their watery particles, thereby rendering the fluids more viscid and coagulable and thus promoting their natural tendency to putrefy. In virtue of its expansive property heat acts with much efficiency upon the skin, opening the pores and producing profuse perspiration. In this condition of things we are indisposed to exertion, and general languor both of body and mind is manifest - the relaxed state of the exterior surface renders the body more alive to changes of temperature and to the encroachments of disease. In warm weather the skin being constantly open is more likely to imbibe any morbific poisons that may exist in the atmosphere, and the energies being much depressed, when attacks of sickness supervene the recuperative powers are much less adequate to the support of the system, than under more favorable conditions.

B. Cold is an agent producing an effect directly the reverse of the one just considered, being a depressant or sedative, and as such, is one of the most important and valuable therapeutical remedies in our profession. Coming in contact with the living fibre it occasions contraction and condensation, gives tone and vigor to the solids and retards the evaporation previously set up by heat, it acts upon the pulmonary and cutaneous systems and enables the latter to repel any inordinate propulsion of the fluids from the internal viscera. When the natural exhalations are prevented from escaping by the skin, they are compelled, as we have before stated, to find exit through some other channel, and the only way is through the internal organs. Hence in winter we have a great increase of the internal secretions. When applied for a short time only, cold acts as a powerful tonic and stimulant by its reaction, though in order

that this reaction may occur, it is necessary that the system should possess a certain degree of vigor; but when the agent is continued too long a time, this recuperative power is destroyed and diseased action is set up, in consequence of the repulsion of the blood from the capillaries and surface to the viscera which become congested and unable to rid themselves of the excess of fluid accumulated there; this effect is visible in the enlargement of the liver and spleen in intermittent and remittent diseases. In regarding then the actions of this agent with the preceding one, two very obvious deductions, in the treatment of disease may be drawn; 1 When there is inflammation or congestion of the internal organs, we can derive the excess to the surface by the application of heat externally, and, 2, when the excitement exists upon the surface, the application of cold will aid in equalizing the circulation.

c. Dryness is that state of the atmosphere which contributes in the highest degree to a healthy condition; thus the air containing the least quantity of moisture, is peculiarly fitted by its elasticity and rarity for the purposes of life and in this condition it more readily transmits the rays of the sun, while being a nonconductor insulates the body and prevents the escape of the electricity which acts so important a part in the operations of nature, and in no department perhaps is its influence more strongly exercised than in the movements of animal life. When the air is dry and electrical, the senses are more acute, the vital energies act with greater freedom and ease, the appetite is increased and the mind vigorous and active. The striking difference in favor of the influence of a dry atmosphere may be seen by comparing the mental condition of the poor in Italy and in England. In the former country, life, vivac-

ity and enjoyment characterize the most destitute; while in the latter land the poor are morose, sluggish and desponding. I am far from attributing this great diversity to national and hereditary influences so much as to the different constitutions of the air. To illustrate this fact we need but analyze our own sensations upon a morning which may be intensely cold, and if the air be dry and crisp, we move with life and animation, but if loaded with moisture, although the temperature be much elevated, we feel stupid, chilled and inert.

d. Moisture, the last of the atmospheric changes of which I shall speak, is the most unhealthy condition, and unlike the last, its conducting power is strong. The air is at all times more or less charged with moisture, but it may exist in sensible or insensible quantities; in the former case we have it either as fog or rain, the former of these conditions - that of fog - being

the one more conducive to the production of disease. Of course as the density of the atmosphere is increased it follows the laws of gravity and sinks to the lower parts of the earth's surface. On this account valleys are not so healthy as mountains, the air being less pure. It is in moist weather that contagious or epidemic diseases extend with the most alarming fatality: if I recollect rightly Dr Rush in his account of the yellow fever says, that even in cold weather while the air continued moist the disease spread with frightful malignity, and I would suppose that its extension was effected by the moist air being first a predisposing cause, and secondly an exciting cause by being the medium through which the virus of the malady is readily diffused. In a moist atmosphere the air is incapable from being already saturated with water, of taking up or absorbing the exhalations from the body, and coming in contact with the surface is itself ab-

sorbed, goes into the lymphatics, thence into the blood rendering it thin, watery and deficient in its globules. We see persons residing in damp, moist localities are pale and anemic and their tissues soft and flabby.

Certain exhalations of moisture have been called by the name of miasmata, but they must be combined with vegetable decomposition to effect its malarious influence. Perhaps the principal fact that moisture plays in engendering these miasms, is, that by its density and the affinity which these malarious exhalations seem to have for this condition of the atmosphere they are thus confined to the surface of the ground and are not so readily dispelled by the winds. The condensation of latent caloric as it is radiated from the earth after sunset forms a moisture or dew which in some countries is certainly fatal to strangers, and even in the most healthy localities is detrimental to the health of persons not properly

protected.

Very many of our most dreadful diseases perhaps owe their origin to this pernicious agent. Inflammations and affections of the lungs, remittent and intermittent fevers, diseases of the liver and spleen may be attributed to this cause; pulmonary diseases undoubtedly can be frequently traced to the effect of moist inhalations. I have seen in a family residing in this city intermittent and remittent fever, with disease of the liver, where there was no miasmatic influence if by miasma we understand "certain poisons produced by the action of heat, moisture and vegetable decomposition". These people were perfectly healthy and went to reside in a new house; soon after they became the subjects, some of febrile and some of hepatic disease; one had remittent - convalesced and was attacked with intermittent; another had intermittent primarily, and a third abscess of the liver; notwithstanding skilful medical treatment these cases were pro-

longed and tedious; and even after some amelioration in the symptoms there was a constant proclivity to relapse. This state of things continued for some months, till being in the house one day I observed upon looking into the yard, that opposite to each of the cellar windows there was a green fungous deposit on the brick pavement. Thinking I had discovered the cause of all their sickness, I asked if there was not water in this cellar, and was told that it had been nearly full ever since they had been in the house. Now here there was no vegetable decomposition - for I examined for myself - we had only heat and moisture and yet there existed all the phenomena of disease which are attributed to miasmatic causes; still according to the definition it was not miasm for all of the elements necessary to the production of this poison were not present. In this case I told the family that they need not expect to recover until this water was drain-

ed off - this was done, and since then they have enjoyed their former health.

The question as to the existence of malaria is one which has been long discussed and regarding which there is yet diversity of opinion; I am disposed to adopt the view of Dr. John Bell of Philadelphia - as exhibited in his lectures; if his examples are facts - and there is no reason to doubt their correctness - I think he clearly proves that an exclusive, peculiar miasmatic poison does not exist, but that all the effects which have been referred to this cause, may as well be derived from other sources, especially the constitution of the atmosphere. If there do exist such malaria they certainly must vary in different regions and under different circumstances, for in various countries we find certain fevers and other diseases all attributed to miasmata and yet these fevers are as diversified in their nature as the natural productions of different climates. And yet I frankly confess that

I have not given this subject that consideration which its importance merits, and before I either adopt or reject the theory of miasmata as specific poisons I desire to investigate the matter thoroughly.

II. Endemic Causes - next demand our attention. This class perhaps might be so analyzed, that we could consider each of its most prominent features under some one of the particulars which have already passed under our notice. Yet their influence is so immense and their operation so much overlooked, even by medical men, that I have thought the subject worthy of more than a passing notice.

That there are certain peculiarities in different climates, certain effects consequent upon localities of dwelling, kind of labor and social habits, is a fact, which, if assumed without argument in the former part of this essay, was so, because any attempt at proof would only have flung obscurity about a very clear subject. Not less than these physical causes, do

the moral influences which are exerted over a community affect their health and well-being;- as a people are enlightened or degraded, moral or vicious, do we find them vigorous or imbecile, active or slothful;- and probably as we become better acquainted with the history of our race, will we be more enlightened as to the nature and tendency of Endemic Causes. Our profession, and indeed the world, owes a lasting debt of gratitude to James Cowles Prichard for his unwearied exertions in studying and illustrating the natural, physical and moral history of man, and his works on this subject will afford to the physician who looks at mankind beyond the limits of his contracted practice, a store of information which very much enlightens this interesting subject.

It has occurred to me, that endemic diseases are not hereditary. I do not at this moment recollect any local constitutional affection strictly endemic, that is communicated by the parent

to his child, or that will ever be developed in the child if he be removed from his native place. We would doubtless err, if we were to attribute the many maladies which afflict mankind to any one cause, for like causes produce like effects, and to suppose that the bronchocele of the Alps and the liver disease of India arose from like or the same causes, even admitting every possible modification of climate, habit etc. would be absurd. The kind of food and habits, quite as much as external influences, affect the system in those localities where special forms of disease prevail. For instance a disease of German and Russian Europe called Plica is a violent and dangerous malady; this is owing to the filthiness of living and the custom of the poor of those countries keeping the head constantly covered with caps and other appendages, thereby preventing the escape of the exhalations from the scalp, which by confinement become putrid. I have frequently seen this disease among recent immigrants from Europe

and also isolated cases among the loathsome Dutch who reside in our city; but bad and noxious as this disease is, it may be completely cured by a decent regard to cleanliness, if nothing more. The Ophthalmia of Egypt is attributed to the peculiar arid winds that come from the desert. The Cretinism of Switzerland producing such distressing physical and mental effects is supposed by observers to be occasioned by the peculiar atmosphere breathed from the time of birth, among the close and undisturbed mountain gorges, where the air is seldom agitated by the action of winds. A memoir on this subject in the July Number, 1847, of the American Journal of Medical Sciences is highly interesting, and shows among other information, that this malady may be contracted by perfectly healthy persons exposed to the noxious influences of those regions. I might refer too, to the well known goître, affecting the thyroid gland of the Alpine residents, and the cause of this has been supposed to be drinking snow water;

enough examples however have been mentioned to show the fact of special diseases existing as the effect of certain special local causes. Yet the mere acknowledgement of this fact is not enough for us. It points out the duty of every conscientious man to investigate closely and with discrimination the many circumstances that may affect the health of those who surround him; to trace diseases to their origin and endeavour to procure the removal of the cause whether that be predisposing or exciting; in short it should impress upon our minds the truth of the trite maxim "an ounce of prevention is worth a pound of cure."

III. Infection is the last of the external causes which have been mentioned as inducing disease. A distinction has been made between this circumstance and contagion and upon a critical analysis the line of demarcation may be made apparent; but in the few remarks I shall make the terms will be regarded as synonymous.

By contagion we mean the transfer or propagation of disease by actual and personal contact either with an individual or with matter which may bear the virus upon it; in many instances we have a perfect appreciation of the effusion of a disease or virus from some person suffering from it, to one in perfect health. In inoculations we know that the matter inserted is absorbed, passes into the circulation and sets up its morbid action throughout the body; this body then becomes as really a source of disease as the original one, and thus the foci are increased ad infinitum.

Some diseases as the venereal, scabies, certain ophthalmia and cow pox require this absolute contact for their propagation; while others are communicated through the medium of the atmosphere, as variola, measles, scarlatina, hooping cough, influenza, Erysipelas, typhus fever and perhaps others. Now why the effluvia the aura arising from the latter diseases will reproduce the original in its

perfect form, by means of atmospheric communication, while the others require personal contact is a mystery which I cannot pretend to solve. I can easily comprehend how morbific exhalations from a diseased surface may be absorbed either by means of the skin, or, by inhalation, coming in contact with the blood in the lungs, thus introduce the disease; but why do not the other admitted contagious diseases produce the same effect in the same way? Regarding the subject in this light I am inclined to deny the property of absolute contagious efficacy to the diseases enumerated in my second list. I desire to be correctly understood; not denying that they possess the property of being transmitted from one person to another, but I believe that in order to make any impression upon the system, they must find it in some respect deviating from healthy action and thus rendered susceptible to the attacks of the virus. It has been ascertained by careful clinical observation that the

malignant infection in the pure air does not extend more than a few feet from the diseased focus. This may be owing to the gradual dilution of the concentration of the poison, which, at last, becomes so admingled with the pure atmosphere, that the acridity or vigor of its action is in a great measure dissipated. Unquestionably the increase and malignity of an infection depends materially upon the condition of the atmosphere; for I believe this morbific principle is disseminated upon purely physical laws; if the air be pure, it is raw, and of course a bad conductor and the disease must subside for want of a medium of propagation; but if it be impure, it is proportionably dense, a good conductor, and a powerful auxiliary in the generation of disease. Besides atmospheric conduction, contagious and infectious poisons are much modified by temperature, as we have before intimated, heat and moisture aiding their advance, while cold and

stormy weather often check further progress, as if by magic power.

Of all the circumstances which promote the operation of this class of diseases I attribute to none a supremacy over, or even equality with, mental emotion. We can never know the experience of those who are swept off during the calamity of a pestilence, but I firmly believe that the predisposing cause in nine cases out of ten is fear. The best prophylactic in the period of a malignant epidemic is a tranquil, contented mind, and after it, a body whose functions act with regularity and harmony. The proportion of clergymen and physicians who are the victims of contagious epidemics and pestilences is very small; and taking into consideration the enormous labor and fatigue that a medical man endures in such a time, it is a matter of wonder that he does not die, rather than that he lives. The servant of the Creator, and the friend of the creature stand side by side in the

struggle of life against death, and he whose craven heart is appalled with the terrors that beset him and who seeks safety in flight is a traitor to his race and a recreant to his God.

Medicine! thou art indeed a noble Mother! and ennobled is he - not who wears - but who deserves the badge of thy sonship. Wherever is heard the moan of pain, the scream of agony, the howl of despair, thy true children shall be near to whisper Hope. In the dark and damp vault, in the desolate hovel, in the dreary housetops, shall thy sons give health to the diseased life to the dying and comfort to the distressed; in vain shall Death reach forth his cold hand to snatch the child from its mother - the wife from her husband - the sister from the brother - the loved from the loving! Brave and generous sons hast thou! When the "arrow of death flieth by day, and the pestilence walketh in darkness - when destruction wasteth at noonday - when thou -

sands fall at our sides and ten thousand lie dead in our streets", they banded children shall wage a fierce and glorious struggle with the Destroyer. Grand and sublime spectacle! 'Tis the battling of the weak with the strong – of the mortal with Mortality – of Hope with Despair – of the Soul with the Grave!

Gentlemen of the Faculty,

I have thus endeavored to perform the duty assigned me, and upon its execution and my final examination depends your opinion as to my right to the degree of Doctor in Medicine; You may discover errors – you will discover many imperfections in the manner in which I have fulfilled my task, if so I trust that both may be corrected by after study and observation. With its faults however, I commit my essay to the ordeal of your judgement and the cour-

tesy of your indulgence.

Gentlemen,

Accept, individually, my warmest wishes for your happiness, and my thanks for the invaluable benefits you have conferred upon me; and believe that it is my sincere desire that your Classes may ever prove worthy of the instructions which are tendered to them by those who occupy the proud eminence of Professors in the University of Maryland.

James J. MacKie.

Baltimore Jan 11. 1848.

An
Inaugural Dissertation
On
Delirium Tremens

Submitted to the Examination
of the Provost Regents and
Faculty of Physic of the
University of Maryland
For the Degree
of
Doctor of Medicine
by
Samuel Richard Jackson
of Virginia

March 1st 1848

Baltimore
Wm Desperandum
1848

S. R. Jackson

To

Nathan R. Smith M.D.
Professor of Surgery, in the University of Maryland.

Sir, Many considerations point out, the propriety, of dedicating to you the following productions; Beside the debt of gratitude due you, by all the republic of medicine, for the many and important services, you have rendered the science; — Obligations, of a superior nature, demand this tribute from me, as a teacher, and Lecturer, from whose public instructions, I have derived most of the principles, which are to conduct me, in the arduous task of alleviating the sufferings, and afflictions of humanity. I am peculiarly indebted to you, therefore, Sir accept my warmest wishes, for the long continuance of your health, and successful labours, for the advancement of medicine, and the medical & chyrurgical character, of our beloved country, which will ever predominate, in the bosom of your obliged friend.

The Author

To

Dr Wm H Farson, Snow Hill, Md.

This is respectfully inscribed, not only in consideration of his high merit, as a Gentleman, Friend, and Physician, for which he is so justly esteemed, by all his acquaintances; but also as a grateful tribute, of thanks, for the valuable instruction, and many marks, of friendly attention, bestowed while he had the direction, of the early medical pursuits, of his relation and Pupil

The Author

An Inaugural Dissertation, On Delirium Tremens, Mania, &c.

In submitting the following Dissertation, to the inspection of the Trustees, and Faculty, of the University of Maryland, as a necessary, legal, preliminary, for obtaining the degree of Doctor of Medicine, - I shall follow unhesitatingly, the example, of many of my predecessors in soliciting indulgence, for the imperfect performance of a task imposed by necessity, and undertaking with much anxiety and apprehension.

The variety of pursuits, which necessarily, occupy the mind of a student, all disposed in technicalities, their greatness, as well as their novelty; effectually, prevent him from paying, such exclusive attention to any one subject, as to enable him to throw any new light upon what was already known, In general therefore he must content himself, with the more humble office, of arranging, the observations, and experience, of others in such manner and dress, that the praise of industry and taste may be granted him; although that of invention, or originality, be denied, whilst so many sages and

Phylosophers, with gigantic minds, trained to reason, A Priori, have spent long, and laborious lives, in exploring the deep recesses of medical science. New discoveries, or much addenda, can hardly be expected from one, with trembling and uncertain step, is but lingering upon the threshold of her boundless storehouse.

In selecting Delirium Tremens, as the subject of my Thesis, I do not feel that I am any better qualified than upon many others, but feeling deeply as I do for that class of unfortunate men and women, who are its exclusive victims, I feel disposed to write upon this disease, with a threefold view, viz. to bring its frightful name before the public Eye and at the same time to better qualify myself for the trial in its treatment, which has been so common, for the last few years, and will in all probability, be still more frequent in despite, of all the powerful onsets, of the Letatal systems, and its advocates, This very remarkable disease occurs only in habitual Drunkards, and in such as are, in the inordinate use of opium and its different preparations, perhaps also the use of other narcotics may give rise to it, — It is now well ascertained, that

so long as the usual quantity, of the stimulus, is used, the disease seldom, if ever, makes its appearance, but if from any cause, as necessity, temporary disgust, sickness, gastric irritation, &c the stimulus, is suddenly left off, or in a great measure diminished then the activity of the Brain becomes morbidly increased, and mental derangement, in many instances speedily ensues. If Dr Coats be correct, it is not the application of the stimulus, that produces, mania a Potu, but the sudden intermission, of the use of these articles, which in my opinion is the fact.

Symptoms — This disease is generally characterized by general disquietude, occasional tremor, constant watchfulness, a cool moist skin, delirious loquacity, and illusions of the sensorial faculties, — It most frequently makes its appearance, with general lassitude and indisposition, a distressing sensation about the epigastrium, anorexia nausea, and vomiting, vertigo great confusion about the head, destitution of sleep, an anxious expression of the countenance, and tremor of the hands, sometime after this, the the countenance expresses alarm, and suspicion, the eyes are cast about, with rapid

and Enquiring glances, or often fixed as upon some object, that seems to attract for a moment, and then as quickly withdrawn; The tremor of the hands, increases, the patient becomes irritable, or irascible, he is extremely restless, walks or runs continually, to and fro, and is unable, to attain one moments sleep. At this stage of the disease, he now begins to manifest, mental disorder, he becomes very loquacious, expresses no corporeal suffering; and is constantly tormented with continued successions of alarming, disgusting, and frequently ludicrous, apparitions, - He now fancies he sees a variety of objects, as men with fire arms, or other weapons of death, Dogs Cats, mice, and other animals, in his room and disgusting vermin upon his person and clothes, - To avoid these and other illusions, he frequently calls loudly for assistance, runs to the door to make his escape, flies to the window to leap out, is greatly agitated, vociferates, threatens, uses violence, and raves vidently, He hears strange sounds over his head, and around him, or in an adjoining apartment, or loud and frequent knocking at his door, His mind and body are in continual action, he calculates projects, walks

timidly about his room, counts his supposed wealth, and then frequently runs to the window, or door, and calls loudly to some person, who he supposes he sees passing. Suddenly starts from apparitions, seeks secrecy or demands protection, will insist he is well, and supposes he is confined for some secret motives, and importunes to be permitted to be allowed to pursue his daily avocations, - If when in this situation violence be used, or he be flatly contradicted, it greatly exasperates him, - But if he is gently treated, and his opinions somewhat acknowledge, he generally will be entreated and persuaded, and can almost always be made manageable; When the disease is of the most violent grade, the patient becomes furiously delirious, talks incessantly and cannot recognise his most intimate friends, and daily acquaintances - It is very remarkable that in this disease, patients never seem to suffer any pain or bodily disease, and that they never complain even from dislocations, or fractures, although they subject them to constant friction and concussion, It is said by some writers, that when Mania a Potu supervenes upon inflamatory and pumpul diseases

as Pleurisy &c, the principal disease seems to disappear, and returns again at a later period when the brain and nervous system is restored to its ordinary tranquility, - The pulse in this disease is of a varied character, sometimes hard, full, and frequent, but is much oftener soft, full, and quick, without strength or much tension, - The skin generally maintains its usual condition, being soft and moist; the tongue is moist and generally covered with a white fur; the bowels are generally loose or constipated, and there is generally an entire loathing of food, throughout the whole course of the disease, and a constant desire for cold drinks, The duration of this disease is very irregular, sometime slight watchfulness, moderate tremor of the hands and partial disturbance of the Brain, sensorial illusions continue for a day or two and then pass off, at other times the disease continues for a long period, with all the phenomena and but little mental Hallucination is noticed during the day, Dr Armstrong observes that when the disease continues over one month, there will be risk of permanent derangement; Stoughton, affirms that mild cases when left to themselves have been known to terminate spontaneously, sometimes however, typhoid

Symptoms supervene in confirmed Drunk-ards, an end in death. In persons of robust habits, the disease frequently terminates in Convulsions or apoplexy thus terminating the patients existence

Pathology

Notwithstanding the conflicting opinions of the medical world hitherto, upon the pathology of Mania a Potu, it is now generally agreed that the seat of the disease is in the Sensorium Commune and is purely of a dynamic character - unconnected with inflammation or vascular turgescence, - It is a morbid mobility of the Brain by the sudden abstraction of a Stimulus, long continued in by which its excitability, had been long repressed or blunted; Dr Coats considers it as consisting in a heightened activity of the Sensorium" from the generation, as it would seem of an inordinate activity of vital action in the Brain, similar views of this affection are taken by Dr Johnson, and many Eminent British Physicians, - Dr Joseph Clapp of Philadelphia has written much and adduced many post mortem Dissections, to fix this disease in the Stomach, consisting in an Irritation of that organ, but his

arguments in its favour, and reasoning upon the same, have been so completely set aside and logically used up, by Professor Eberly of Philadelphia, that I deem it useless to say any thing upon the subject.

From our knowledge of the modus operandi of narcotics upon the human system, knowing that their power is spent upon the brain and nervous system - it seems to me that the most unskilled Pathologist reasoning a priori, would not fail to fix this disease in the Brain, and the phenomena present, would lead the observer, to call it morbid mobility or activity, of the Brain, always following the sudden abstraction, of the Habitual Beverage, as may be noticed in the history of every case with which the Physician may have to do, - there does however often appear after death, strong evidences of congestion, and vascular turgescence, and even inflammation, having existed during life, but all these changes may have taken place in articulo mortis, and the stimulating treatment, being alone successful would seem to settle this opinion.

Prognosis

Almost all writers upon mania a Potu

give it as their opinion, that it is not a dangerous disease, but we are as disposed to regard all Diseases, affecting an organ so delicate and necessary to the functions of the body, as more or less dangerous, When the disease occurs in a simple and un-complicated form, and in Constitutions not already shattered and broken down, from long continued intoxication, it may be regarded as manageable and not without much apprehension for the patients safety. If the disease should supervene during the course of protracted fever, or more especially if it should come on during the existence of violent Visceral inflammation, it is almost sure to prove fatal. It is said that the disease is certainly fatal when it occurs in confirmed Drunkards, who have laboured previously under Hepatitis or some other chronic organic affection, Dr Armstrong remarks that subjects of this kind generally rapidly sink, When the Delirium becomes constant, the pulse rapid and very small the extremities cold, and covered with perspiration, the Pupils small and contracted with subsultus tendinum

and an agitated motion of the muscles of the face, death may be regarded as inevitable. It is also particularly unfavourable, when Coma with Sonorous respiration ensue. The occurrence of tranquil sleep, even of short duration, announces a favourable tendency in the disease, and indeed no symptom can be regarded as an indication of a declension in this disease, so long as the patient is unable to obtain sleep, for sleep is the only evidence we have of the subsidence of that morbid mobility of the Brain which hitherto prevented the Brain from quieting down to the sleeping point or Rest which is doubtless the essential pathological condition of the disease.

Treatment

If we have arrived at a correct pathological definition of Delirium Tremens, and it does really consist in a morbid activity of the sensorium independant of inflammation, or sanguinious congestion, the chief indication in the treatment of the disease, is obviously to subdue that inordinate cerebral activity, and it remains only to enquire what will best answer this purpose, or what course of treatment will best accomplish the end in view. We should constantly bear in mind the fact, that this disease

is almost invariably produced, not by the application, but by the abstraction of the customary stimulus, - which will lead us at once to conclude, that the best way of removing it is to supply a stimulus, which is capable of blunting and exhausting the morbid excitability, of the sensorium - For this purpose Opium is decidedly the best remedy, that the Materia Medica has yet furnished. I would not however, agree that all cases may be properly managed by Opium alone, even though it has been asserted by Dr Coats Opium is doubtless the remedium magnum, in this affection, - Yet certainly there are cases when other remedies are called for, and are important auxilaries, and adjuvants, in its management, when the bowels are loaded, as there is reason to suppose they frequently will be Cathartics should certainly be employed previously to the employment of this narcotic - This disease like all others may supervene upon an infected condition, of the alimentary canal, and in this condition, the opiate plan has entirely failed, untill the bowels have been attended to - Dr Eberly of Philadelphia has adduced several cases, showing the the ability of this thing, and which could only be relieved after the bowels were properly

evacuated, He shows furthermore that the Opium produced even bad Effects in Cases of this Sort, which are Easily managed after he had Employed his Cathartics, This is Contrary to the Experience of Dr Coats, who states that he never saw a Case in which Opium even produced the least harm, I presume however Dr Coats was rather ultra in his opinion of the Entire Capability of opium to meet Every Case of Delirium Tremens - The quantity of Opium necessary to be used in Every Case is very irregular and uncertain, and Sometimes the Quantity is Enormous and truly astonishingly Large, In Some Cases from 20 to 30 or Even 50 to 200 is required in divided doses to produce the desired Effect, The best mode is to administer two Grains Every hour, after pre purgation, untill Sleep is induced.

Bloodletting

The Opinion of the Profession seems to be now well decided against the indiscriminate Employment of the Lancet in the treatment of this disease, It is generally regarded as improper, and inefficacious, Dr Sutton remarks that in nearly all the Cases, where the Lancet was used their was a fatal termination, - Dr Armstrong, asserts that but very few cases require the loss of Blood

Dr Brown of New York, coincides in opinion with Dr Armstrong, he thinks in strong constitutions, not shaken by reiterated Drunkenness, that moderate venesection, is of value in the management of this affection.
Dr Stewart who had much experience in this disease, that is in its management, says, that nearly all the cases, treated upon the anti phlogistic plan Died, whilst nearly all which were treated upon the stimulant plan recovered, - Dr Gregory, Lambert, Eberly, Potter, and many others distinguished men, are decidedly in favour of the stimulating and narcotic treatment, in uncomplicated cases of this disease However in all cases where there was much plethora or apoplectic constitution, connected with evidences of determination, to the Brain, or where the delirium is furious, with vascular turgescence, I should be disposed to use the Lancet and even repeat it if necessary untill these symptoms disappeared

Cupping

This remedy has been highly spoken of by some very distinguished Physicians, both of America and Europe, although I attach but very little value to this against, in the treatment of this disease, and indeed are also many they Regard Cupping as a very ineffectual agent and consider them seldom necessary.

Except in the management of local inflammation, However where there is a sanguinous determination to the head, and the raving becomes constant, and violent, - Cups applied to the temples, and back of the neck, may be resorted to with some hope of benefit; Dr Parrish of Philadelphia, has spoken very highly of the use of Cups, in this state of the affection, Dr Eberly also speaks of a case, where the Delirium approached the raving of Phrenitis, in which the Cups offered immediate, and decided benefit.

Blisters

I am disposed to regard blisters of equal, if not of superior value to cupping, Blisters applied to the legs, or back of the neck, will afford great benefit, in cases attended with great cerebral excitement - Dr Eberly saw one case where the disease seemed to verge upon Phrenitis, very much mitigated by the application of a large Blister, or plaster of Flies, laid between the shoulders. Dr Coates thinks Blisters of more use than cupping in debilitated cases, as they do not weaken the Patient so much, which sometimes is a matter of great importance

Emetics

This class of remedies have been highly extolled, in the treatment of Mania a Potu some say

that they deserve more attention in this malady, than any other remedy except Opium. They have however failed in the hands of some very distinguished practitioners as Dr Eberly &c he also states that they are in his in some cases unequivocally injurious, and we should think disasterous consequences, might result from the use of emetics especially when they fail to operate or results in much prostration, and debility. - Dr Clapp seems to rely upon the use of Emetics, in the management of his cases, and supposed they were the proper agents, relying as he did upon his motives of its Pathology, locating the disease in the Stomach, - As an anfilary or preparatory means, to the employment of Opium, - I have no objections to Emetics, Dr Brown regards them as rather anfilaries than curatives, and says, he can bear testimony to this fact in several cases in his own practice.
It is often extremely difficult to affect the stomach in this disease by Emetics, without administering very large doses.
Dr Clapp gave 20 grs of Tart Ant, before emesis was produced, and Dr Brown mentions a case in which 30 grs of this article was given before vomiting ensued, - I should prefer a combination of Tart Emetic and Ipecac 2 grs of the former & 15 grs of the latter every 15 minutes.

Cold & Tepid Affusions

These remedies have been recommended in this disease, as being agents of considerable moment, - Dr Armstrong advocated them much, and speaks of them great ability in his practice, The best way to employ them is to pour the Cold water upon the head from a distance and to be continued from 2 to 3 minutes at a time, it is however only proper in cases where the sanguineous determinations are violent to the head, and the raving is continual.
Dr Armstrong in using the tepid affusion thus advises, he dashes about 3 gallons of tepid water upon the body, highly impregnated with salt, than he has the body wiped dry with flannel, places the patient in bed and administers 30 or 40 Drops of Tinc Opii - He also carefully advises, that when the Cold affusion be used, that the patient should possess a strong constitution, and when done, immediately to give some gentle stimulant, such as warm wine, or Camphorated Spirits Amonia &c.
I can say but little from my own experience in regard to tepid affusions, having never used them or seen them used by others, but with regard to Cold affusions, I can speak with some confidence, I saw them used once, and as I believe with decided injurious consequences, The Coma seemed

to become more profound upon its use, the extremities became cold, and universal prostration ensued, and in the space of one hour, the patient launched into the eternal world

Recapitulation

Besides the use of Opium and the other remedies of which we have spoken, in the treatment of this disease, various other stimulating remedies have been used and with some degree of success Camphor, and Assafoetida, are considered as valuable agents in restoring the Equilibrium of the mind, Camphor and Opium have been used in Combination, but not with more decided benefit than was obtained from the Opium alone, - Dr Eberly speaks of using Camphorated Tinc of Opium in the declension of the disease with the happiest effects, or in the decline of the more violent forms, - Also in the incipient forms of the disease, with decided advantage,

With regard to the use of ardent Spirits in the treatment of this affection, the profession, seem to be very greatly opposed, I should dislike very much to employ in the case a remedy, whose dreadful effects I had been call^d upon to alleviate and remove, - It seems revolting to to the very feelings of the friends of the patient and places the

Physician in the position of a second Frogey.
No let this never be said when the Materia
Medica lays upon our shelves laden as it
is with remedies possessing greater powers
and in every way suited to the indications
in the case, and equally easy of administra
tion, and as palitable to the patient, however
squeamish his stomach might be, - There is no
doubt that opium will do all that ardent spirits
can do, and when a more diffusible stimulus
may be required we can resort to Assafoetida,
amonia, Camphor, Hoff's Anodyne, with an
equal hope of success, and it seems to me
with a great deal more propriety, - Of late a great
deal has been said of the superior powers
of Ether over all other medicines, in the
treatment of this disease, It seems to me
to be well qualified to to take the place
of opium, and if indeed it cannot let opium
aside, it certainly would be an invaluable
adjuvant and auxillary, - I should be dis
-posed to use this agent in this affection, should
a case come under my direction, - The Electric
magnetic Machine, might be advantageous
ly employed in the management of this
disease, if it possesses the power of causing
the nervous excitement to move on and
thus produce an equilibrium of excitability
in the Brain or nervous systems

It would seem well qualified to scatter the morbid Activity of the Brain and restore quietude, and seat reason once more upon her throne, and thus give relief, However, time and future applications of the magnetic power, will settle this fact, and substantiate or disprove my young speculations upon its modus operandi.

The diet should be mild and mitigating during the whole management of this disease, and particularly during convalescence, attention should be paid to this fact; It is said or thought that animal broths constitute the best diet, The patient room should be kept quiet and dark and no interviews allowed except with nurses and attendants, We think this precaution has been too much neglected by writers upon this disease, and my attention was called to this fact from observations made upon this subject by my preceptor Dr Mc H. Farrar and from having discovered its beneficial effects in his practice

Finis

Now Gentlemen having finished the task imposed upon me, I take this opportunity to express my entire satisfaction with the fundamental Doctrine which you have taught during my

collegiate course, and at the same time to express my gratitude for the many marks of kind and disinterested friendship shown me by you all, — Be pleased, therefore to accept my best wishes for the continuance of your health and successful labours in the cause of science and humanity, and for the glory of my Alma Mater,

I am with great respect your obliged Serv.t

Sam.l R. Jackson

An
Inaugural Dissertation
on
The Modus Operandi of Medicine
Submitted to the Examination
of the
Provost Regents and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Charles E Boone
of
Maryland

In compliance with custom I propose to offer a few desultory remarks in regard to the mode in which medicines exert an influence on disease. This is a question which every student of the healing art is engaged to solve, and in entering upon its solution, or endeavouring to ascertain and explain the action of remedial agents, on the living body, it is necessary that we examine their influence, both in the healthy and diseased condition: by the first, we learn the positive, or actual power of a medicine on the body: by the second, we see how that power is modified by disease; moreover, in the latter condition, we sometimes discover, re

medial influences which our knowledge of the effects of medicine on the healthy body could not have led us to anticipate: the beneficial operations of arsenious acid in agues or in lepra could never have been discovered or inferred from any experiments made with it in health. Nor could we have formed a correct estimate of the remedial effects of opium or its properties, by using it in cases of tetanus, nor by mercurials in fevers. All the information attainable, in relation to the modus operandi of medicine, is confined perhaps, to a knowledge of the organs upon which they primary act. The medium through which their impressions are conveyed through

-out the system, and the succesive order of phenomena which results from their operations.

I propose in arguing this Question, to divide the action of medicine into direct and indirect. Formerly most of the articles of the materia medica were supposed to act upon the organism mechanically. I doubt not (says Locke) if we could discover the figure, size, texture and motion of the minute constituent parts of any two bodies, we should know without trial, several of their operations, one upon another; as we do now, the properties of the square a triangle. Did we know the mechanical operations of the particles of Rhubarb, Hemlock and

opium, and a man, as well, as a matchmaker does those of a match, whereby it performs it operations; and of a file, by rubbing upon the wheels, would alter any of them; we should be able to tell beforehand, that Rhenbarb purges, Hemlack kills and opium puts a man to sleep. The functions of the body, the production of disease, and the operations of medicine, were explained on mechanical principles. The action of stimulants for example, was supposed to depend upon their pointed and needle like particles, and the operations of emollients upon their lobular form. This doctrine has failed in a measure, and few articles of

the materia medica act in this way. among the few articles, that act in this way, are the pods of Macuna pruriens, Quicksilver and powdered Tin. The first of these acts truly mechanical, by piercing and tormenting intestinal worms, and thereby compel them to let go there hold. in support of this theory, Chamberlain tells us, that he sprinkled some of the hairs in a calabash full of very large round worms, in a little while, the animals began to writhe and twist about, evincing thereby extreme torture. On examining them with a magnifying glass, the hairs were found sticking loosely in various parts of their body.

Again the action of demulcients

in irritation an inflammation of the intestines &c is to sheath the membranes from irritating matter that may be lodged therein. Thus we administer them when acid poisons are swallowed; in pulmonic affections, when the cough is dry and hard, and the expectorated matters are acid. In inflammation of the Bronchial Tubes, they probable act by their lubricating and soothing influence which they exert on the nerves distributed to the fauces, and Bronchial membranes, probably by a reflex action. As the subject will not allow me to discuss it more fully here, we go on to notice the indirect or remote action of medicine

The doctrine

which prevails upon this subject resolves into, the two following position: in other words, the medium through which their impressions are conveyed throughout the system are two viz. First by absorption; secondly by sympathy.

In pursuing this question still farther, we may notice, How poisons and medicines which have entered the blood vessels affect distant organs. viewing the question theoretical. I conceive two way; by one or more of which remotes parts might become affected, after medicinal globules have passed into the blood. First by modifying or altering the properties of the blood, and thereby unfitting it for carrying on the

functions of the body. Although no facts are known, which can be regarded as absolutely proving that the action of medicine is primarily on the blood; yet none I believe are inconsistant with such a notion in all cases. It has been observed by Andral; that as the blood nourish the solids; and as without its presence they cannot support life, the state of the solids cannot but be influence by the state of the blood.

In the first place, it must be admitted; that in many diseases the properties of the blood are altered, and in some cases these alterations often appear to be primary: that is, they precede alterations of the solids. Secondly, in some diseases the blood acquires

poisonous properties, and is capable of transmitting the affection of the individual from whom it was taken, Thirdly by the use of poisons, medicines, and particular kinds of diet, the properties of the blood becomes altered, at the same time the condition of the solids is modified, now as from the ~~blood~~ food is formed the chyle, from chyle the blood and from the blood the solids, a necessary connexion must exist between the quality of the ingesta and the condition of the solids.

But if medicines or poisons introduced into the torrent of the circulation, act primary on the blood. What is it, may be asked are the effects produced?

In some cases the action is mechanical,

As, when air is introduced into a vein. A very small quanity of air passed slowly into a vein, mixes with the blood, traverses the lungs, and is exhaled with the pulmonary transpiration, without causing any serious accident. Again when the Quantity is increased in a sudden manner, the air mixes with the blood contained in the heart forms with it a foamy liquid, which does not pass readily through the capillary system of the pulmonary artery. In consequence of this obstacle to the passage of the blood through the lungs, the respiration and circulation becomes necessarily troubled, and the animal dies in a state of asphyxia, and not from any pernicious action of the air

on the nervous system.

Again some substances exercise a chemical action on the blood, as the mineral acids, Alkalies, various metallic salts &c. The affinity of these agents is principally directed to the fibrine and albumen of the liquor sanguinis, and to the constituents of the blood disks. Hydrocyanic Acid would appear to be a chemical agent since it make the blood oily, fluid and bluish in colour, such substances therefore exercise a chemical influence; cause a speedy death, when they are thrown into the veins.

Again it is possible that organic substances may be decomposed in the blood, without that fluid undergoing

any apparant change. A proof of this is furnished by oxalic acid. Dr Coindet injected eight grains and a half into the femoral vein of a dog, which produced death in thirty seconds. It appears to be impossible that the poison could pass off, by any of the excretions. yet the poison could not be detected in the blood, immeadiately after the death of the animal. How are we to account for this? as the blood possessed all its usual properties. We must suppose, that the poison underwent decomposition in consequence of a vital process carried on within the vessels. It must not be assumed, that agents, which affects chemical changes in the blood out of the body, when injected into the veins, nec-

-pary produce the same phenomena, when absorb from the intestinal canal, or any other surface, for the quantity taken up at any one time by this process, is small in proportion to the volume of the circulating fluid; and the affinities between these agents and the constituents of the blood seems to be kept in checked, by the vital properties; Moreover the affinities of these substances for organic matter are more or less satisfied in the alimentary tube.

Again medicine may affect changes in it, which are neither mechanical or chemical. Strychnia and morphia produce no obvious effect on the blood. Yet it is possible that they may cause changes

in its vital condition, and to these, part of their symptoms, caused by their use, are to be referred.
We notice in the second way, by which remote parts might become affected, after medicinal globules, have passed into the blood, by pervading the structure of the organ acted on. The usual mode of explaining the action of remedial agents after their absorbtion; is, that when they have entered the bloodvessels, are carried in their ordinary course of circulation to the lungs. Here the blood undergo certain chemical changes, and is probable deprived of parts of the medicinal particles, at least this appears to be the case, with respect to certain odorous substances. The blood still impregn=

ated with medicinal particles, is returned to the heart, from thence it is transmitted to all parts of the system. In their passage through the tissues of the different organs, it is presumed that these particles act on one or more parts of the system, which are endowed with a peculiar susceptibility to their influence. Thus the particles of opium are supposed to exert a specific influence on the cerebral tissues, strychnia on the gray matter of the spinal marrow, mercury on the salivary glands, diuretics on the kidneys &c. We may adduce several arguments in favor of this theory, but absolute proof cannot be offered. Our facts merely show the passage of medicinal particles into the blood, and the affections of remote parts.

but the link which connects the two phenomena cannot be, or at least it has not been ~~approximated~~ ated. We may give a few plausible arguments in favour of this theory, it is this: the molecules in passing through the organ acts on its tissues, and thus give rise to a functionable change. The kinetics effects of Nitre, Turpentine &c are readily explained in this way.

The Question may be ask here, How is it, that particular parts only are effected, since medicinal molecules are in contact with every part of the System? This Question may be explained in this way: that every organ in the body has it peculiar and appropriate stimuleus, by which it is excited into action. If this be so, then

there can be but little difficulty in conceiving that a substance dissolved in the blood, may circulate through the system, without producing any particular effects until it reaches the organ or organs upon which from its peculiar properties, it is design to operate. The reason why a medicine acts upon one organ, in preferance to all the other organs of the body; why Jalap for instance operates upon the intestines and not upon the brains and lungs, we can no more explain, than we can the reason why the planets are kept revolving in their orbits. If we are told that the movements of the planets are the result of attraction, so we may say, that the determination of medicine to certain organs is

occasion by a similar attraction

I propose to notice in the last place the influence of medicine on disease viewing the Question theoretical, I conceived two ways, by which therapeutics exert their influence over diseased action. viz.

First by the influence of medicine over the cause of disease

Secondly. By modifying the actions of one or more parts of the System

1st. By the influence of medicine over the cause of disease. In ascertaining the influence of remedial agents over the cause of disease, we find them exerting in one case a direct; in another an indirect influence, under such circumstances, to render the subject more explicit; I shall discuss it under these two divisions.

It is important in every morbid condition, to enquire into the cause that have produced; or is producing the phenomena. This must be removed when practible, is a self evident indication, for instance, if a thorn be run into the flesh, it produce irritation, and this irritation will be kept up, as long as the thorn remains in the part, by extracting the thorn, the recuperative power of the part will speedily repair the injury sustained.

Again we look for a moment to itch, and see what is the cause of this disease Does it depend upon a peculiar state of the blood for its existence? or upon a peculiar insect? investigation and experiments has

proved the latter to be the true cause and to which it owes its contagious principle. Then in what way does sulphur exert an influence over these entozoa, we cannot account for it in no other way, than the curative powers of sulphur, depends on its poisonous principle over those insects. Nor can we account for the action of Anthelmintics on intestinal worms, in no other way than sulphur on itch, they exert a poisonous influence upon the worms, thereby destroying them. Time; all of them do not act in this way. Nor is it in this way, that we account for their influence over them; as the pods of Macuna pruriens, it exert an influence, by the hairs piercing and torment=

ing the worms, thereby causing them to let go their hold, and by the use of a cathartic they are expelled. In the one case they are brought away live, showing the mechanical action alone, in the other they are dead, proving that some deleterious agent has destroyed them. It is in this way, that we can account for the direct influence of medicine over the cause of disease.

We ~~must~~ notice in what way does medicine exert an indirect influence over the cause of disease. For an illustration of this subject we take for instance Dropsy. First what is dropsy and its cause. We define dropsy to be an accumulation of serum into the cellular tissue and shut serous

cavities. The causes are numerous, more so, than any other disease that we are called upon to treat, they are diseases of the heart, Kidney suppressed, Perspiration, some obstacle to the venous circulation, from plethora and anemia.

We see in what way does Anemia give rise to dropsy; and first what is the condition of the fluids and solids. we find the blood all map altered and deficient in its red particles, the serum increased in quantity, and the eye of the practitioner is struck with the exsanguinis of the patient, the blood indeed is in an impoverished condition. Then according to physiology; the muscular system must follow as a consequence of the nature of the blood, from which they de-

-vine then ~~prostration~~, they become pale, flabby and easily overcome by fatigue and prepine. It is reasonable to presume, that the involuntary muscle the heart, partakes of the general debility of the muscular system, and becomes incapable of sending blood with the requisite energy. How is it, in this condition of things, that effusion takes place? It may be, that the great tenuity of the liquid, facilitates its escape through the pores of the capillaries, that these pores becomes relaxed and patulous, from the want of due stimulus of the blood, or in other words, the blood vessels be comes very weak and the serum of the blood, which is so abundant, oozes out of the vessels by exos moses.

Have we any means by our remedial agents, to counteract this condition of the system? we have; by restoring unto the blood its lost properties, at the same time, strengthing the tonicity of the muscular system. We do this by the administration of some preparations of Iron. food animal diet, and the cold shower bath. We explain the influence of this treatment, in this way. the Iron becomes absorb into the circulation restoring the blood to its proper quality, at the same time, the blood with the conjunction of food diet and the cold shower bath, both acting as a tonic, restoring the tonicity of the muscular system, thereby checking the effusion of any more fluid, functions of the

different organs are restored to their normal action, the effusion is reabsorbed, and thrown out of the system by the different emunctories.

We will go on to notice our last proposition, medicine which exerts an influence over disease by modifying the actions of one or more parts of the system. In a large majority of instances the cause of disease are either not known or they are not of a material nature. In all such cases we administer medicine with the view of producing certain changes in the action of one or more parts of the system, and thereby so altering the diseased action as to dispose it to terminate in health. For an illustration of this

fact, we take Pneumonia. First what is the condition of the lungs in Pneumonia.

We find in the first stage, the lungs are congested with blood, and of a deep red colour. There are more liquid, than air in its cells. It is heavier than natural, inelastic, and retains in some degree the impression of the fingers. When the engorged portion is cut, there exudes a reddish frothy serum. If the inflammation continues, the lungs undergoes a further alterations, and presents the following character. It still remains red externally and within, it crepitates no longer under the finger, the lungs becomes hepatized, dense, easily Broken, and more solid than before.

now it contains no air. It is evident that the spongy character of the organ is lost, and become solidified, by the infiltration of bloody serum.

Secondly, in what way does our remedial agents, exert an influence over this morbid condition. We may answer this, by modifying the action of the heart and arteries and create interstitial absorbtion. In the first stage we may cut it short, by the timely employment of bloodletting and Antimony, we do this with the view, of depressing the heart and arteries, and relieving in part the functions of the lungs, which is overpowered by too much stimulus. at the same time, the Antimony is also depressing the force of the hearts action, and creating in

=terstial absorbtion, also determin=
ing to the surface. Whilst in the sec=
ond stage, we prefer the use of Iruen=
y on account of its greater absorbing
power, and arresting the effusion of
Lymph.

So much do we gain from
the study of the nature, causes, and
pathology of disease. Prior to the age
of Hippocrates, no science of med=
icine existed. It was deemed un=
necessary to enquire into the etiol=
ogy of disease; except as regarded
such as was evident; Anatomy
was discarded; Pathology was
unknown, in fact dissection of
bodies, with the view of detecting
the nature of disease was contem
=ned. In short nothing but the evi=
dence of the senses, was admitted
as the basis of medical science.

since the profession has turned their attention to the relations of causes, symptoms, and pathology, the science has been rapidly progressing. We may say that these principles are the keystone to the practice of medicine: yet, without observation and reasoning, we certainly would be left in the dark. It has been acknowledged from time immemorial, that medicine is the science of observation; nay it has been said that it consisted solely in observation. That is to say, it has been allowed, that nothing can be done in medicine saved by means of well observed facts. That the true rule of practice must be deduced from a proper combination of reason and experience, that without experience

all preconceived theory would be vain and useless and by simple experience, without any attempt at generalization, we should frequently fall into gross errors, and be unable to profit even by the best experience. Thus it is, that the great object of the science of medicine is to remove disease, we find that no sound science can exist without theory. Theory is the natural process, which binds observed facts together, compares them with each other, and deduces appropriate rules of practice. And it is now understood every where amongst the scientific, that we are indebted not only for full practical usefulness but for every science. Facts are, doubtless the elements of science, but the science itself does not exist, until these facts have been brought to=

gether, sifted and compared, and great general principles deduced therefrom.

An
Inaugural Dissertation
on
Remittent Fever.
Submitted to the Examination
of the
Provost, Regents and Faculty of Physic
of the
University of Maryland
For the
Degree of Doctor of Medicine
By
Frank Patterson
of
North Carolina

Remittent Fever—

Remittent is the endemic fever of warm climates, especially of low, wet or marshy localities; but it is occasionally to be met with in more temperate regions and is not unfrequently observed in certain districts of our northern states—

This disease is more generally observed in Autumn, than in any other season of the year, in all countries which it invades, but it is not unfrequently known to be prevalent in summer and is sometimes seen in spring, it appears in the south as early as the first of June, it seldom makes its appearance in the middle and northern states before the close of August—

This is a fever though observant of somewhat regular exacerbations and abatements, never wholly subsides like an intermittent; it is said to be essentially the same disease as intermittent fever; sometimes the two diseases are so much alike in their type that it is difficult to say whether it be intermittent or remittent

Hamilton Times —

Hamilton is the inclement season of warm climate, especially of late, and is usually localized, but it is generally to be met with in more temperate regions and is not infrequently observed in southern districts of our Northern States.

The disease is more generally observed in Autumn than in any other season of the year in all countries where it prevails but it is not infrequently known to be prevalent in summer and is sometimes seen in spring. It appears in the earth in early as the first of June, it takes means it appears in the middle and Northern States during the close of August.

This is a pure theory, observant of scientific reasoning and establishment, upon which subsists the an explanation, it is more to be considered the disease as independent from something the has been one or much alike in their type that it is difficult to say whether it be intermittent or remittent

if the morbid action which exists between the paroxysms be ascertained to be fever, then the disease is denominated remittent, if not fever, it is intermittent. There is every grade of remittent fever, from the doubtful and nearly imperceptible febrile paroxysm up to an almost uniform continuous fever — the paroxysms of remittent fever occur sometimes like those of an intermittent, consisting of a cold, hot and sweating stage, but not altogether so distinct and decided, others again assume different types, sometimes without any discoverable intermission; the several types may occur in the same case, or the disease may commence as continued fever and may become after a time altogether intermittent — most frequently the disease assumes the quotidian form with a paroxysm occurring every day — it sometimes assumes the tertian, and sometimes the quartan form, and so on —

Symptoms —

The symptoms of this disease in the commencement are listlessness, headache, unpleasant sensations at the stomach, loss of appetite, disordered taste, with pain in

different parts of the body, especially in the back, the tongue is slightly furred and the pulse somewhat excited, with sallow or dingy complexion - the Symp=
=toms differ in different cases, they sometimes commence with sensations of warmth and chilliness every day or every other day with intervals of healthy feeling and at last assume the form of the regular paroxysms of Remittent, during the first of these Symptoms the patient is not confi=
=ined to bed, but is in a languid and disagreeable Situation — When the disease has fairly set in the chilly sensation which was at first observed amounts then almost to rigors, the face is generally pale, of an ashy hue, the lips become purple, the pulse is small irregular and depressed, there is gene=
=rally nausea and vomiting, with considerable pain in the back loins and extremities, the chill is never so severe and longcontinued as in an intermittent, the general duration is from a few minutes to an hour - in some cases the chill is almost imp=
=ercepti̇ble, the patient complains of chilly sensations while to the bystander his skin feels warmer than in

health - to these symptoms succeeds a state of excitement accompanied by a high degree of heat; the skin is hot and parched, the respiration is hurried and the pulse increased in frequency and fulness also in force - the tongue is usually coated but the fur is thin at this period - there is nausea and sometimes vomiting - complete loss of apetite - the patient complains of head-ache which is severe and throbbing - the eyes are suffused - the face flushed, and very great thirst - not unfrequently delirium is an attendant - These symptoms generally continue from eight to sixteen hours after which time they begin to abate and we per= =eive moisture about the face and neck, which continues to increase until the whole body is covered with gentle perspiration, after which the patient feels much relieved and is apt to fall into a pleasant slep from which he awakens much refreshed and improved, there is very little or no head-ache, thirst or nausea, the skin soft and cool, pulse nearly natural, tongue seems disposed to

clean, apetite better &c. This is the remission, though it is sometimes not so complete as I have here describ=ed it. the duration of the remission is variable from two to twelve hours and sometimes longer according to the type it has assumed either quotidian or tertian. after this remission another paroxysm of fever takes place which follows the course of the other, but sometimes differing in some respect, and thus the disease continues, each exacerbation becoming more protracted and the remission shorter until the disease arrives at its height of severity, after which it is of a comparatively continuous form, the pulse con==tinues to increase is sometimes above 120 per minute with increased tension and force, the tongue is covered with a thick yellowish-white coat which as the disease adv==ances becomes brown or black in the centre, dryness and heat of the skin increased. most generally tenderness upon pressure in the epigastrium, also burning pain and a feeling of weight & oppression in the region of the stomach. the tenderness and pain in the stomach are not much complained

of until the third or fourth day, after which they are apt to increase with great irritability of stomach, attended frequently with nausea and vomiting, the matter thrown up is usually yellowish & green, of a bitter taste, the stomach sometimes will not retain either medicine or drink. the bowels are usually constipated especially in the early stages. the stools are sometimes dark-coloured and offensive they are commonly bilious ~~passed~~ though sometimes showing a deficiency of bile. at a later period of the disease diarrhoea is apt to set in and sometimes dysentary makes its appearance, at other times there is vomiting with looseness of the bowels resembling cholera morbus. the urine is red and turbid in the latter stages. is scanty. said to be more copious during the remission; - the yellowish hue of the skin and white of the eyes are striking characteristics, though in all cases they are not present; when present they occasionally make there appearance on the first day, but not usually until the fourth or fifth day. sometimes the yellow matter is secreted

upon the surface so as to stain the patients cloths, not apt to be present if there is anything like bilious diarrhoea – the nervous system also is very much deranged in this disease, headache is a common symptom accompanied with vertigo, roaring in the ears and other symptoms such as intolerance to light, flush=ing of the face, redness of the conjunctiva indicating vascular determination to the brain, a confusion of thought is now apt to supervene amounting to dele=rium in severe cases, there is drowsiness or stupor and occasionally apoplectic symptoms though these are very rare – wakefulness is another disorder of the nervous system with restlessness and jactitation. hiccough is a very troublesome symptom it does not generally appear till near the close of the disease —

When this disease is about to terminate favour=ably there is cleaning of the tongue from its tips and edges – the skin becomes moist and soft – the eyes clear – subsidence of delirium & drowsiness – an erup=tion about the mouth – dark tarlike discharges – the pulse is not so frequent, more full and expansive, –

these symptoms are followed by a more healthy condition of the various secretions, the system regains strength, the different organs are restored to their proper tone and at length health is restored —

Causes —

The most common cause of Remittent fever is the Miasm arising from low marshy districts of country - there are also said to be a variety of other causes capable of producing this disease, as a high degree of heat combined with moisture - also irritating substances such as worms lodged in the bowels may give rise to fever of a regular remitting form, though this is called infantile remittent, and arises from intestinal irritation - in remittent fever arising from these causes, the biliary organs are not necessarily implicated - * Remittent and intermittent fever arise from the same cause - Miasm - tis said that remittents are apt to occur when there is excess of the poison, when

* In cases arising from Miasm they are always implicated - *

the cause is slight there is intermittent - intermittent is also more apt to occur in the cooler latitudes & at the commencement of the sickly season than remittent - the disease generally makes its appearance in from one to three weeks after the patient has been exposed to the Malaria, sometimes he is affe= =cted much sooner and sometimes later ——

Diagnosis ——

Remittent is apt to be confounded with typho= =id & typhus, and with yellow fever, it may be distinguished from typhoid & typhus by its more regular and decided remission and by the yello= =wness of the skin, also by the absence of epistaxis, tympanitis, stupor and rose coloured spots, by the rarity of thoracic symptoms and spasms of the muscles, by the absence of sordes of the gums and teeth, in the pathological alterations of the stomach and spleen, in its shorter duration and influence of the season and locality in its production, also by its tendency to end in the inter= =mittent form of fever — Tis not however so

easy a matter to form a diagnosis between remittent and yellow fever as it is between remittent and typhoid & typhus, for there are many close analogies and resemblances between remittent and yellow fever, the latter was looked upon by Dr Rush as being only a high & malignant grade of common bilious remittent fever – in yellow (fever) the disease generally comes on suddenly with full bounding pulse, accompanied with severe and acute pain in the head from the commencement, the chill is short and slight and rarely repeated, the yellow discolouration of the skin is more constant and more strongly marked than in remittent – the eyes are red and suffused – the black matter which is thrown up by vomiting is one of the best diagnostic signs – after death there is a peculiar lesion in the lungs – the stomach and intestines differ from remittent in containing a black viscid matter – in remittent the liver is enlarged and of an olive-grey colour, in yellow fever it is destitute of its usual quantity of blood, and

is of a bright yellow colour, the gall-bladder contains a dark coloured fluid, the spleen is natural in all respects - in remittent it is found invariably enlarged or softened - there are other diagnostic signs between the two diseases which (I do not think) necessary to mention - Remittent fever is also apt to be confounded with gastritis from the nausea and vomiting which is frequently present in the commencement of the disease, but we must form our diagnosis by ascertaining the cause of the disease and by ascertaining whether or not there has been exacerba=
=tions of fever, if the patient has been exposed to malaria &c ——

Prognosis ——

The prognosis is generally favourable when the remissions become regular and increase in length, the pulse slow and soft - the skin moist and of a natural colour - eruption about the mouth, stom=
=ach quiet - cleaning of the tongue - cessation of thirst - dark discharges from the bowels, and quiet state of the nervous system — The prognosis is

unfavourable when there is a tendency to the typhoid form of fever accompanied with delirium or other nervous disorder - gastric distress and watery discharges from the bowels - suppression of urine - tongue dark and incrusted and unnatural skin —

Anatomical lesions —

The mucous membrane of the stomach is found to be inflamed also that of the small intestines - the liver is generally enlarged and softened, there is always a change from its natural colour to that of a bronze hue - the gall-bladder generally filled with vitiated bile - the spleen is enlarged and softened - the brain is some=times found to be inflamed and congested - the viscera in the chest are generally found to be healthy when there is no complication. —

Treatment —

In the forming stage of the fever we generally have gastric irritation, headache and slight disorder of the circulation; the remedies to be employed are gentle evacuants, leaches to the epigastrium and cold to the head with rest and abstinence

inflammation when there is a tendency to the deposit from of fever accompanied with delirium or other nervous disorders, pustules, vesicles and watery discharges from the bowels. Suppuration of serous tissues, ulcers and sinuses and immoderate sweats.

Anatomical Lesions.

The mucous membrane of the stomach is found to inflamed also that of the small intestines. The liver is generally enlarged and softened, there is always a clear from the natural colour to that of a strong lime. The gall bladder generally filled with vitiated bile. The spleen is enlarged and softened. The brain is sometimes found to be inflamed and congested. The nerves in the chest are generally found to be diseased when there is no complication.

Treatment

In the growing stage of the fever we generally have public intelligence, feasting and illegal discharge of the excretions, the remedies to be employed are public measures, bleeding in the epigastrium and cold to the head with rest and abstinence.

when the fever is fully formed and there is a strong full pulse, a hot skin, or determination of blood to the brain or other important organs, venesection is speedily demanded; if the patient be of a vigorous constitution the bleeding should be carried to such an extent as to make a decided impression on the System, Such bleeding need hardly be repeated, local blood-letting is also necessary especially to the head and epigastrium. cold applied to the head and stimulating pediluvia as revulsives are required, after which the administration of purgatives to clear the bowels of morbid secretions, for which calomel followed by castor oil or epsom Salts has been recommended, or calomel in combination with rhubarb or jalap will answer equally as well. emetics have been recommended to evacuate the stomach, also to equalize the circulation and restore healthy secretion, they must be used early before there are any signs of gastritis or they will prove injurious. the bowels should be kept moderately open during the disease by the administration of small quantities of blue mass, castor oil or other mild laxatives. enemata may be given when demanded.

evacuations should not be carried too far, they may be pro=
=ductive of injurious consequences. whenever watery dischar=
=ges appear we must desist from purgatives and give
an anodyne or emollient injection to allay intestinal
irritation — in the more intense and excited variety of
the disease cold effusion may be employed during the
exacerbation with great benefit, sponging the surface with
cold water and cool acidulated drinks, the effervescing
draught &c are very soothing to the patients feelings, they
tend to allay thirst and diminish the degree of febrile
excitement — When the case is lingering and feeble and the
paroxysms decided, bark and its preparations are highly
indicated, quinine is preferable to the other preparations
as it can be given when the other preparations might not answer
so well, as for instance when the skin is dry —

During the period of convalescence the patients diet and
condition of his bowels should be attended to, he should
use daily some mild tonic, such as infusion of Cinchona,
gentian or other of the mild tonics until he is restored
to health —

An Inaugural Dissertation on Syphilis

Submitted to the examination of the Provost, Regents and Faculty of Physic of the University of Maryland for the Degree of Doctor of Medicine,

by

Henry M. Cohen
Virginia

1848

To

Nathan. R. Smith M. D.

Professor of Surgery in the University of Maryland

Dear Sir

I take the liberty of inscribing the following pages to you, as an expression of my grateful remembrance of the value of your instructions, of my respect for those intellectual faculties which render you pre-eminent amongst the Surgeons of our time, and of my admiration for those moral excellencies which call forth the warmest regard of all those who are acquainted with your character.

That you may long be spared to be an ornament to our University, and the honour of your City is the earnest wish of,

Dear Sir,

Your obliged Pupil,

Henry M. Cohen

Baltimore Feb. 1st 1848.

The subject which I have chosen to defend before the Faculty of this University, is one, which of late years has, from its great importance, demanded the vigorous investigations of the most eminent physicians in this country, in England, and upon the Continent. I have selected it from the long catalogue of diseases, because during the period of my novitiate I believe I have seen, in the public Hospitals and in private practice, a sufficient number of cases to make me somewhat acquainted with the subject. Though I do not know that the Learned Faculty to whom this Essay will be submitted, will necessarily expect me to adduce any thing new upon the disease, I trust that in the following pages I shall be at least able to show the extent of knowledge which the profession has attained, and thus, whilst complying with the requisitions of the Faculty, give some slight evidence of diligence on my part as a Student.— I do not presume at so early a period of my professional life to venture upon the arena of conflicting opinions, to do so

would be but to waste my energies in fruitless and unavailing efforts. —

In pursuing this subject I am under great obligations for the amount of knowledge which I have derived from our esteemed Professor of Surgery, both from his prelections and clinical instructions. From the large and valuable work of Sir A. Cooper, as well as from the more modern one of Ricord, I have obtained much useful & information and many practical views. —

With these preliminary remarks, before going into the subject I cannot forbear expressing my sense of obligation for the many valuable hints from my worthy preceptors Doctors Selden of Norfolk for whom I shall ever entertain sentiments of the highest respect, and of gratitude for the many acts of personal kindness extended to me while with them. —

proper location, and for a regard to the prejudices of his pupils, declared that it was derived from America, knowing full well that there none of its inhabitants ~~[illegible]~~ either cared about the imputation or would attempt to defend his country.

Oviedo catching the idea promulged it abroad. Syphilis was known in the time of Charlemange, who established houses for lewd females who were affected, and who were compelled by law to enter them: and in the 11th Century houses were also established for the reception of diseased women in England and likewise in Provence. In order to prove more fully that the disease is not of American origin, we shall quote a portion of history which is related to an epoch in which the disease was epidemic and prevaded whole regions of country simultaneously.—

When Charles 8th of France was marching upon the City of Naples for the purpose of besieging it; Pope Innocent sent messengers advising him to retire, because of the prevalence of the disease. Charles

unheeding the advice of the Pontif marched upon the city and the disease made fearful havoc among his troops, so that he was obliged to raise the seige and retire within his own kingdom, all of which occurred in 1492, at which time Columbus was in America and ~~unak~~ Europe entirely ignorant of such a country until the return of that navigator in 1495 when its existence was proclaimed.

Many and various were the surmises which occupied the profession at that time. Some inclined to the belief that it arose from the eating of human flesh: others, from personal uncleanes, exposure to the vicissitudes of the atmosphere & others, the judgement of God. The Authors of that time declare through the Moder^ns who echoed their sentiments, ~~declare~~ that the venereal disease was so contagious as to be contracted from the clothes of an infected individual; by contact, as from a kiss, or sleeping or by breathing the atmosphere around a person so affected. In the first years of the 16th Century Frere Castorius gives as among the proximate causes of the disease either coition or sleeping a long time with or [illegible]

vessel with a diseased person; and later in the same Century we find that Cardinal Woolsey having whis=
=pered in the King's ear, while labouring under Syphilis, (as was supposed) was indicted for the offence.
In the succeeding century however, the conviction of its being communicable by the commerce of the sexes alone, became fully established.

Syphilis since the date of its acknowledge=
=ment has been marked by many of the most fearful symptoms and consequences. In the earlier periods of its history we learn that it was marked by a great depres=
=ion of the nervous power, accompanied with high fever; to which succeeded Chancrous ulcers and buboes. Infact that after the introduction of the poison it rapidly assaulted the Constitution, and exhibited itself in the great lymphatic system of absorbent glands. In those times when therapeutical skill was not enlightened by an inductive philosophy; and when the medicaments were few in number and their Modus operandi imperfectly understood we are not surprised that the profession stood aghast as they witnessed the fearful havoc which

this disease made among the people; but now that Philosophy has guided the minds of man to observe effects, and trace by laborious investigations the intricate mazes of symptoms down to the cause producing them; we find Science attaining a proper respect, because it demonstrates the truth to the understanding and alleviates the ill and misfortune to which mankind are subject.

In our time Syphilis is found to result from an impure coition; and manifests itself in Chancre to which follows Bubo, and these constitute the primary stage of the disease. The secondary or constitutional is marked by soreness of the throat, inflammation of the tissues of the nose, cutaneous eruptions, syphilides which may appear in the forehead, neck or on any part of the surface. The tertiary phases are those in which the great fibrous membranes suffer, as the periosteum and frequently the bones themselves.

When a man has had connexion with an infected woman he will discover after a lapse of

several days, or as many weeks either a discharge from the urethra accompanied with violent scalding pain which is a disease of the mucous membrane or he will discover one or a number of distinct pustule, or it may be abrasions or excoriations of the surface, either upon the Preputicum Glandis, or behind the Corona, or else upon the true skin of the penis, or upon the genitals elsewhere. These ulcers are preceded by a kind of tingling or itching sensa=tion in the part. In females however they are on the Nymphae, the Clitoris, deep in the Vagina, & occasionally upon the thighs.

Besides the true Chancre there are other pustular eruptions of those parts, which will call forth the skill of the practitioner in perfecting his diagnosis, and it is of great importance, because the treatment is entirely different, in some cases it will be strictly antiphlogistic and in others the alterative course of Mercurials will be required.

True Chancre makes its appearance in the form of a small pimple, with a hard, elevated, inflamed base, attended with an "itchy sensation". In a short

time the pustule breaks, and leaves a circular ulcer, with abrupt edges, excavated and without granulations. The base remains hard, elevated & rounded; and under pressure between the thumb and finger it feels like some hard body embedded in the tissue of the part. Bacot says that in some instances a small indolent ulcer is seated, as it were, in an indurated "Knob" on the Glans; and occasionally indurated tubercles passing deep beneath the surface with scarcely any visible ulceration, will be followed by constitutional symptoms of Syphilis. Carmichael says that in such cases, we will probably learn that ~~that~~ a small ulcer existed at first on the callous part, which healed under the use of some local application.

When Chancre is seated upon the common skin of the penis, it presents a very different appearance, it has a dark livid colour, and is not so much excavated and the induration is not so great; when the pustule bursts and discharges itself, by the exposition of its more fluid part, a scab of a mottled appearance remains, under which more matter is collected and which in time disengages the scab, leaving a surface

of much larger extent, which is again covered by another scab and each succeeding scab becomes larger than the preceeding. Sir A. Cooper has remarked that Chancre if situated upon the Glans, the Corona, or upon the internal surface of the Prepuce has a darker colour than an ordinary sore, and is one of the distinguishing signs of the disease.

Wherever a Chancre is situated the distin=guishing marks are, a vertical, shelving, jagged and indurated edge and the inflamm'd hardened base is a more certain sign of its existence. These taken together comprehend the prevailing sentiments of the most distinguished surgeons concerning its presence. For although the sore may heal, yet an induration remains, which may by a transit of the poison, light up a secon=dary or constitutional affection. Sir Astley Cooper in his lectures, declares that if he were asked whether it is possible to determine that a sore on the penis is not a chancre he would answer "that it was impossible to say positively that it is not, because

Chancre varies exceedingly in its appearance in different individuals, also in the same person in different degrees of irritation, every one who has had any practice in his profession, must know, that secondary symptoms do occasionally appear after sores which at the time he was led to believe were not syphilitic. I could say in an instant, whether a sore had a syphilitic action; but still a sore may not have the character of Syphilis and yet be so".

Ricord in his late work contends, in opposition to Cooper, that Chancre may be located in the mucous surface of the Urethra, and that it is frequently the source of stricture of that canal. These remarks are founded upon a series of experiments conducted on a large scale; to wit, by an inoculation of the pus derived from the urethra & that from chancrous sores. This method he regards as the only and sure test in Medico-legal cases. His results are, that the pus of Gonorrhoea inoculated, produces no specific result and never produces a chancre. Jno Hunter however inoculated

Gonorrheal matter upon the glans penis with the following results; Sores of a chancrous character made their appearance at the points of insertion; but these chancres healed of themselves, thereby proving that they were not true chancres or syphilitic ulcers. Hence it would seem difficult in view of the reports of Ricord, to reject a doctrine which demonstrates as clearly a difference, which the illustrious Cooper found difficult to determine with positive certainty. For in the cases of excoriation where there is syphilitic taint, we have seen the syphilitic taint manifested in secondary symptoms whilst both the patient and the practitioner were entirely at a loss to reconcile the matter.

There does not appear to be any strong peculiarity in the appearance of the pus derived from chancre except in its poisonous action. Its sensible properties are a tenacious, greenish, dirty yellow looking matter. In the experiments of Ricord upon the matter, he rejects the idea that it derives any peculiar virulence from the fact ~~that~~ of the animal heat of the body; for matter which he had kept in tubes, similar to those

in which vaccine matter is preserved, he found to be just as effectual after the lapse of eight days, as that which he extracted from a fresh matured chancre. It has also been said that the pus globules have a form different from those of ordinary purulent matter; this may or may not be true.- Ricord also states that brutes are not subject to this disease after inoculation with this matter; but this fact does not prove that they may not suffer from inflammation of the genital organs under the influence of irritative causes, to which the tissues of all other parts of the body are liable; or may be followed by suppuration, ulcerations be wholly unconnected with the syphilis of man. It appears that this venereal disease when cured or still occupying the system, does not guard the individual from contracting others of the class; and the number of times an individual can be infected with it, has no limit.

A chancre upon the foot, thigh, leg, or upon the tongue will, unless it be modified, secrete a pus capable of producing a similar chancre by inoculation without the participation of the sexual organs; while

no other affection of these parts, whatever its form, or extent or degree of inflammation may be which accompanies it, will not produce a Chancre.

Chancres become irritable from the excitable term of the constitution, in which the pustule becomes inflamed and assumes an erysipelatous character. This form becomes dangerous, says Sir A. Cooper, if it be not properly managed. If, says he, a Chancre which is healthy to day be upon an individual who shall indulge in an act of debauchery, it will on the morrow frequently assume an irritable character, attended with a bloody discharge, an irritable state of the parts and a sloughy appearance. He then points out a class of persons who by the nature of their employment become irritable and in whom the disease assumes an alarming form; to wit journeymen bakers. In the sloughy condition the pulse will be as high as 120 to 140 pr minute in many cases. The whole penis has been lost before this condition could be checked.

Individuals frequently (though not so often in this country) contract both Gonorrhoea and Syphilis

at one coition, in which case by the action of two poisonous impressions simultaneously, the appearance of each is much retarded. Ricord adduces many cases of both in which he inoculated both matters and thereby certainly identified the existence of the two poisons. Notwithstanding this report there are many eminent persons in the profession who contend for the identity of the two diseases.

With the presence of chancre there are two very painful concomitants; they are those affections of the Prepuce termed Phymosis & Paraphymosis — In both of these affections there results from the inflammation of the parts, an irritation of the prepuce and an infiltration into its loose cellular structure, of serum, so that in the first case there will be a total inability to retract the prepuce over the Glans; and in the other when this fold is retracted behind the Corona, there it remains and cannot be returned. Both of these may ~~may~~ exist from ordinary inflammation and do not always attend chancre. When chancre exists accompanied by Phymosis, it will occasion some difficulty in the passage of urine, besides the exclusion of the chancrous

sores from observation, and if there be no operation for its relief, extensive ulceration may go on before the practitioner may be aware. In Paraphymosis the danger is in the strangulation which is produced in the Glans. The chancrous ulcer under these circumstances becomes sloughy and may, even without an operation go on to Sphacelus.

The second of the so called primary stage of Syphilis which we notice is Bubo: this takes place in consequence of the absorption of the venereal virus into the lymphatic glands of the groin, when it lighting up an inflammation in one or two of them finally involves all in one indurated mass. Bubo may be specific or symptomatic, the cases of the latter kind are by no means rare, I have seen both species existing in the same person. For instance we have known the irritation from a corn on the toes, or an ulcer in the popliteal space, give rise to bubo in the inguinal region with inflammation and induration of the lymphatics along the course of their great vessels, or the same result from a sore upon the foot or any other external injury. Hence it is of great importance

both to the patient and to the practitioner in forming his diagnosis. In all cases after having freely catechised the patient upon the rise and progress of the disease we should not forbear making an examination of the penis itself, on which, if there be no cicatrices excoriations or abrasions, or if the individual poses a pure and unblemished reputation - we might proceed to examine the condition of the irritants which by their communications might give rise to Bubo. In some patients the whole chain of glands become involved, extending along Poupart's ligament accompanied with great swelling of the parts, so that walking is rendered impracticable. In most cases however there are not involved more than one or two of the glands.

As I have before remarked Bubo does not always originate from chancre, and in consequence of this, there are many surgeons who believe that it does not arise from the absorption of venereal matter; but from inflammation located in the extremities of the lymphatics excited by the chancre. This idea at first might appear a little plausible but be

observation we know that the matter is infec=
=tious, which could hardly happen from simple
irritation excited by inflammation.
Ulcerations following Bubo do not differ from those
of common Chancre, and the matter from them is equally
infectious. Ricord in like experiments upon chancre
has satisfied the profession by the results of his
observations, which he condenses in the following
brief space. 1st That Syphilitic ulcers are often
complicated with Bubo, which is less frequently the
case with simple ulcers, and they but rarely accom=
=pany Gonorrhea. 2ly That the Buboes, which
accompany chancres, may be either sympathetic
or idiopathic; that the former generally appear before
the 13th day and that the latter can appear at any
period of the existence of the chancre; but chiefly
after the 13th day and during the stationary period.
3dly That the idiopathic Buboes always suppurate,
whatever treatment may be used. 4ly That the pus
of Buboes which accompany chancres, and have
suppurated, has generally produced the characteristick
pustule of the chancre upon inoculation.

5thly That the Buboes which have accompanied ulcers, the specific properties of whose pus, has been disproved by inoculation, have never, even when they have suppurated, produced any result upon inoculation.

The ordinary symptoms which are manifested by the Bubo when it arrives at the suppurative stage, are those which mark that condition in all common abscesses. They are chills, followed by high fever, with exacerbations commencing in the afternoon and continuing until a late hour in the night, then sometimes disappearing with an extremely exhausting perspiration. But it not unfrequently happens that the Bubo becomes indolent and remains stationary for weeks, neither tending to suppuration nor to resolution. The surface being of a red colour, very painful on pressure, are the signs indicating the approach of the suppurative process. Sometimes the extravasations of the bubo extend to a very great distance in, and around, the inguinal region; cases are on record in which the greater part of the pubes was laid bare and entirely divested of integument. Sir A. Cooper

while speaking before his class upon this subject, says, that he saw a patient who was labouring under a sloughing bubo, in whom there was extensive sphacelation of the parts, laying bare the femoral artery & vein, and also part of the sartorius muscle.
In such cases the patient is in danger of loosing his life from the constitutional irritation, and from hemorrhage resulting from the sloughing of the vessels. In these cases there is usually mal-practice in pushing the mercurial remedies, which ought, according to Sir Astley Cooper, to stop as soon as the suppurative stage sets in.
There are a few surgeons who incline to the belief that Chancre is a local disease, and is altogether unconnected with the general system. That the poison remains for a long time dormant in the part; just as the poison of Hydrophobia does in the wound occasioned by the bite of a rabid dog, until a certain period when by absorption it manifests its peculiar effects upon the system. Hence these surgeons classed Bubo among the secondary symptoms of this malady, because after having

once passed from a local to the transitory state it ceased to be a local, while it was not actually a constitutional disease.

Of the Secondary or Constitutional Symptoms.

The symptoms which usually manifest themselves, are generally situated in the throat, nose & on the skin and these pursue their course in a regular order and succession; the throat being the first part attacked. It is ushered in by a dryness and hoarseness of the voice, attended with inflammation of the fauces, tonsils and pharynx, there is usually a redness of these, preceding ulceration, the ulcers are first situated upon the Tonsils, Velum Pendulum and Uvula. These appear to be greyish white pustules situated upon an inflamed base, and rapidly enlarge themselves, when situated in the roof of the mouth and the ulceration goes on rapidly, there is great danger of communication of the process to the bones of the palate, in which case there is sloughing of the mucous membrane attended with a caries and death of the bone, thereby establishing a communicati-

with the nose, attended with a nasal twang of the voice and a horrid fetor, in the language of Sir Astley Cooper "worse even than the foulest dissecting room"; there is surrounding this ash coloured sore a copper tinge which is looked upon as pathognomonic of the nature of the disease. After some time there is a deep excavation in the tonsil resulting from the ulceration, indicating the foul condition of the sore; sloughs mixed with the thick whitish matter come away, and after repeated washings the sore obstinately remains foul and unhealthy. In some cases the inflammation and ulceration have descended to the larynx and destroyed the epiglottis, occasioning great difficulty in deglutition; sometimes the cornua of the Os Hyoides and the cartilages of the larynx themselves are destroyed. Cases are not uncommon in which the uvula and velum pendulum have sloughed away, occasioning great difficulty in articulation.

There are many ulcers of the throat, which simulate the venereal, but

which do not originate from that cause, requiring a different treatment &c, viz: indolent tumefaction of the tonsils; and Mr Hunter says that he has seen a chink in these organs filled with coagulable lymph so as to appear very much like an ulcer. Also cases of swelled tonsils having a slough in the centre, which before its detachment looked very like a foul ulcer; the stage of the complaint, he says, is even more puzzling when the slough has come out; for then the disease has most of the character of the venereal ulcer. In these cases he recommends the practitioner to wait and see how Nature will relieve herself. If there should have been any preceding fever the case is likely to have been venereal. These ulcers also sometimes attack the membraneous portion of the Eustachian tube, thereby affecting injuriously Audition and even sometimes seriously the health of the individual.

Sometimes the periosteum covering the delicate bones of the nose is entirely destroyed and eventually caries of these bones takes place, leaving the patient in a fearful condition. Most commonly

however, the mucous surface is first attacked, which by contiguity produces those fearful symptoms alluded to. This inflammation is marked by a sense of dryness, and tickling in the membrane and followed by a scab or indurated mass on the Schneiderean membrane. Everyone has seen the distressing results of this disease when a communication has been established between the two organs, and have heard the sepulchral nasal voice of such an individual. The nasal bones fall in, the Vomer sinks, the Cartilages follow, the expression and the whole Contour of the Physiognomy becomes flat and inexpressive. In the end the patient becomes dissatisfied with life, meditates suicide, avoids his friends and is equally disgusting to himself and to them.

There is one form of secondary Syphilis in which the Eye is involved, and one which requires a peculiar and active treatment to combat it successfully: that is Iritis. — The Iris becomes irregularly contracted, at one time we find it

elliptical, at another egg-shaped, and in fact sometimes shapes which are indescribable. Besides these contractions, there frequently occur excrescences on the pupilar margin with an alteration of the colour of the Iris: sometimes accompanied with this, is an albuminous secretion in the Cornea which becomes either organized or is absorbed.

Another form of disease dependent on Syphilis, which has not been before mentioned in this essay is Syphilitic Sarcocele; it is necessary that it should be known from a simple Epidydimitis and from other inflammations of the Testicle; the Venereal taint and its attendant symptoms will pretty clearly define its character. The Testicle in a great many cases will be pyriform, heavy and unequal in its relations. It is attended with nocturnal pains in the loins which occasionally precede the attack. An old enlargement of the Epidydimis will usually induce the attack when the system has received any syphilitic taint.

Venereal Eruptions.

This is another form of the protean stage of this disorder. It is comprised in the pustular, macular, and papular exanthemata. The pustules appear variously in different individuals. We commonly see them seated in and about the hands, the soles of the feet, the face and neck, presenting circular masses of friable scales, which fall off or are easily removed, and then leave a pit of a red or livid colour, which sometimes assumes the coppery hue, the subjacent substance remaining hard and unyielding, the pits which follow, have very much the appearance of the remains of small pox. In many cases a white shining belt is found encircling these pits, which is but the detachment of the cuticle around them. In many cases, this disease like Variola becomes confluent, forming large irregular copper coloured patches with portions of white scales adhering to them.

Sir Astley Cooper in speaking of the symptoms said to his class, that the disease assumed so many

various forms, that he would not find in walking through the wards of the Hospital any two individuals affected in the same manner and presenting the same appearance, for said he, they differ in colour and size, some attended with ulceration and others, not all however, having the peculiar coppery hue, some with deep ragged ulcerations with lace=rated edges, and others with scaly eruptions covering large surfaces of the body. This disease is more mild in its character than any other of the forms of Syphilis and will be easily tractable if the remedial course be correctly understood. During the existence of these symptoms both the hair and nails have become affected, the hair and the roots or matrices become involved in a pustular eruption which as it desquamates carries away the hairs that become entangled in the drying pustular matters. Where the matrix of the nail is affected, the loss of the nail often results.

We now pass on to observe the last of all the phases of the disease, to wit.

The Tertiary Stages

Inflammation of the Sclerous and Osseous tissues

It is in a transition stage that the disease is ushered into this phase. The constitution being fully impressed with the noxious fluids, send them, after a lapse of time, to those tissues in which there is naturally a low grade of vitality and there set up diseases which simulate those which are not produced by this malady. Hence we may have, Periostitis or Caries, with or without exfoliations, violent pains simulating Rheumatism & sometimes Necrosis or the death of the bone. This form is said to be non contagious but is transmissible by inheritance to the children of parents so affected. In the children the maladies generally assume a Scrofulous character. As the disease passes on to the third condition we find diseases of the skin, which would have been mentioned before but for the circumstance that they are usually concomitants of this condition. I allude to the tuberculous condition of the skin known under the name of Lupus Syphiliticus, which affects the Cartilages of the nose, the Glans Penis.

similating mucous tubercle, and Ricord says he has seen them on the tongue, and cervix uteri similating Schirrous, or Carcinomatous ~~Ulcerations~~ Induration, these are the transition symptoms of the stage. Besides the bones and periosteum it has been found that the ligaments, tendons, and fascice suffer. Of the bones which are affected, those near the surface are first attacked, as the frontal, the clavicle, Sternum, Tibia &c. The first evidence of their occupation by the disease is a small tumour called a Bode. This may be either an Exostosis or simple thickening of the periosteum and surrounding tissue by inflammation, it being in the commencement attended with but little pain until it has arrived at a considerably advanced stage, the subjacent skin being of the natural hue, not inflamed, which however does not continue long. At length inflammation sets in accompanied with deep seated pain especially at night after the patient is warm in bed; when the pain is felt through the whole limb. After this continues for sometime the tumour gradually loses its hardness and becomes soft so as to fluctuate under pressure

and if the remedial course fails, it ultimately ulcerates and a communication is established with the interior from which proceeds an ill condition discharge. This condition soon affords signs of inflammation of the bone, when exfoliations follow with sanious discharges.

A case of this kind has come under my observation, the patient being under the charge of my Preceptor. This patient presented a carious condition of the lower part of the frontal bone, in which tumours made their appearance, running through the ulcerative stage and followed by extensive exfoliations of the external table of tha bone, during which there followed a fatid sanious discharge. The case has presented itself in this form and has so remained up to the time of writing.

Syphilitic Ostitis and Periostitis may go on to actual erozion and decomposition of the peculiar structure of the bones or may disappear by resolution or by forming exostoses.

Cases have been observed in which great

destruction of the superior Maxilla and the alveolar processes of the Inferior have taken place with loss of the teeth, and great deformity of the features. When caries attacks the large flat bones of the Cranium, eminent danger is threatened by the immediate proximity of the brain. - A case has recently been presented to my notice of a physician who had a taint of this disease and who has now caries of the superior portion of the Frontal bone; large sequestra have come away and the dura Mater lies exposed, red, and inflamed. The exciting cause was some trifling injury which had been received. It is hoped that the dura Mater may supply the deficiency in the bone.

A question has been raised by Surgeons, concerning the Fœtus in utero; whether such a being is liable to the disease. Mr Jno Hunter was under the impression that the disease could not be communicated to it from the mother; while Sir A. Cooper says that he has seen Syphilis in a child soon after birth: and it is a remark known to all, that children are not unfrequently born with copper coloured blotches, accompanied with eruptions and the loss of the nails; also with sore throat

in which the infants voice is husky, with ulcerations in the mouth and in other parts of the body. Sometimes a scaly condition of the skin attended with irritation, running into ulceration and a general emaciation of the whole body.
If life continue for any length of time, the child presents a care worn appearance, and premature old age; such as is seen in many cases of Cholera Infantum and Marasmus. Sometimes also, as has been reported by Alibert, Vegetations are seen about the genital organs and anus.

Treatment.

Syphilis has in its treatment been the subject of much dispension and discussion among Surgeons.

The partie, profess in all cases to cure the disease, but the medicaments are so multiplied and various, that we are called upon to pause in the very onset before we adopt either remedial course. One party with a zeal becoming science and the cause of humanity, contend that

Mercury is a specific, and that the disease in all cases yields most readily to its influence: while the other declares with as much earnestness that it is but an auxilliary in the treatment, and that it will if used in all constitutions, produce in those of an irritable condition a high degree of inflammation attended with an exhaustion of the system, as Ptyalism and other forms of its impression. At the same time they assert that the disease can be cured without resorting to the use of Mercury at all. Those practitioners who pursue a middle course and use the remedies that both lay so much stress upon, as the occasion may require; are supposed to be the safest and uniformly are successful; whilst direful consequences happen to those who pursue the extremes alluded to. Sir A. Cooper among this class says, that Mercury is by no means necessary to procure the healing of Chancre, at least not always; while Mr Jno Hunter says, that Chancre will never heal without it, and Sir Astley Cooper remarks that Mr Hunter's opinion is altogether untenable.

The treatment of Syphilis will be pursued according to the divisions of the disease which have been adopted above. And first of the primary stages. as Chancre & Bubo.

With regard to the Mercurial and Anti-Mercurial treatment, of these Prof. Gibson of Philadelphia has drawn up very elaborate statistics from the most reliable sources; he quotes Sir James McGregor, Dr Franklin and others who from their peculiar situations were most familiar with the disease. The results are as follows. There were 1740 cases of primary syphilis cured without the use of Mercury between December 1816 and 1818. and during the same period 2827 chancres having a hardened base were cured with Mercury. The period of time required to cure chancre unaccompanied with Bubo by the Anti Mercurial course was 21 days and with bubo 45 days. On the other hand, chancre unattended with Bubo and treated with Mercury were cured in 33 days and when attended with Bubo in the space of 50 days. These reports incline us to the belief that while the disease can be treated with Mercury with success,

that, the anti mercurial treatment pursued by some surgeons is better as a general rule, because it is not attended with those disagreeable effects growing out of the use of Mercury.

The usual course, I believe, adopted by the profession generally at the present day is this: When a patient comes to the practitioner with chancre, ~~[illegible]~~ whether it be the Lenitorian or otherwise, he cauterizes the part deeply and freely, because he looks upon the disease as a local affection having a specific inflammation and hopes by the application of the cautery to convert the specific into a common inflammation and thereby cure the disease without allowing it to enter the system and become constitutional. This is said to be the uniform result in cases of chancre which have existed but a few days. But if the ulcer be old or of several weeks duration, no curative effect need be expected, for during so long a period the constitution may have become contaminated and more general remedies are needed. When after the cautery, the ulcer takes on the process of granulation and secretes

what is called a laudable pus; then simple dressings together with attention to cleanliness of the parts will constitute the treatment. If the patient should be labouring under plethora, or turgescence of the vessels of the part, with ~~xxx~~ costiveness, recourse may be had to purgatives, either mercurial or simple. But if the patient with plethora have fever withal, then an antiphlogistic treatment may be conjoined.

If the chancre have an irritable character either resulting from a debauch or from the use of mercury, with excavations unaccompanied with granulations, and discharges a thin watery and disorganised fluid, the caustic should be again applied, and the ulcer dressed with dry lint, until a healthy laudable pus shall be secreted. Care should be taken lest scabs form and the matter burrow deep in the parenchyma of the organ, and inasmuch as the matter contains the poison, it should not be allowed to come in contact with any abraded surface, hence the necessity of great cleanliness.

Ricord has objected to the use of all greasy applications, especially the

Mercurial ointment, and thinks that he has seen chancres multiply from the use of it. When much irritation is produced from the ulcer or from the caustic applied, there occurs not unfrequently Phymosis and Paraphymosis, diseases which I have before alluded to and which are marked with peculiar inconvenience. Sir A. Cooper recommends poultices for the removal and absorption of the swollen condition, which when accomplished and the high inflammatory state has subsided, the ordinary operation of passing under the prepuce a director and slitting it from the corona glandis to the bottom is to be performed, if other means have failed to reduce it. simple lint dressings are to be applied, with washings of warm water or with the watery solution of Opium and reapplications of lint until the parts are united. Paraphymosis produces also very great injury in its complication with chancre, because the prepuce being tightly bound around the neck of the glans penis, it causes strangulation of the part, and the chancre assumes a very sloughy and unfavorable

aspect. In the cure the surgeon forcibly seizes the glans between his thumb and finger and compresses it firmly, whereby the blood is urged backward out of the part and the prepuce is allowed to lap freely over the glans. If the regurgitation ensues so as to make Phymosis the operation before alluded to must be performed. If however it be an old Paraphymosis and will not yield, Sir A. Cooper recommends the division of the stricture part.

In females the sloughing chancre assumes a very ugly character attended with the most foul and irritable secretions. In these cases the constitution not unfrequently gives way. The indications are to sustain the system with Opium and Ammonia combined or with musk, and to allow the patient a nutritious diet. Sometimes sloughing has extended to the Urethra which must be remedied in such a manner that the cicatrix does not contract so as to obliterate the Meatus. In these cases also inspecting the Vagina and frequent washing

of the parts must be enjoined.

Chancres in the Urethra (chancre laive) are attended with all the violence of virulent Gonorrhœa, and must be treated with injections, by emolient poultices, and with occasional doses of Camphor and Opium to relieve priapism. In the Phagadenic variety which is a form of sloughing chancre, Ricord recommends, after it has resisted the influence of Nit: Argent., the dressings of aromatic wine, lint &c; the use of melted wax blisters and powdered Cantharides, which he asserts have been used with success. When the edges have lost their peculiar hardness and the suppuration is profuse, he then resorts again to the use of the lint, wine dressings &c.

There is a variety of phagadenic chancre which has a hardened base even after cicatrization has commenced, which Ricord denominates Hunterian and which does require the use of Mercury in some of its forms of administration. This he says is one form in which Mercury does seem [illegible]

action, if it does at all. Sir Astley Cooper recommends in the foul condition of the sores a free use of Nitric Acid in the necessary state of dilution, which he considers equally sanative as in ulcers upon the leg and other parts of the surface.

After the disease or the impression of the disease has been transferred along the lymphatics to the glands of the groin, we have Bubo. This too has been variously treated by different surgeons. When the Bubo is in its incipient stage, the one class of surgeons have been fond of the inunction of Ung^t Hydrarggri alone or combined with Iodine; others cold application or with compression gently yet firmly kept up. Dr Physick's remedy of blistering the part is used freely in the Office in which it was my privilege to study and with the marked benefit which has been assigned to it. Leeches are sometimes applied around the indurated margin, but the bites sometimes take on inflammation which eventually creates obstinate sores. If in spite of this plan of treatment the Bubo continues to enlarge, with the signs of phlegmonous inflammati

all of these remedies are of no avail, and we should rather use warm emollient poultices so as to induce the purulent secretion; after which the abscess should be opened and the matter discharged. Some Surgeons recommend the matter to be discharged by small orifices, or by punctures. After the abscess has been laid open care should be taken that it is kept clean and the foul matter frequently washed away, then use the application of dry lint and dress as in the cure of Chancre. If it should become indolent with hard and callous edges, these should be carefully dissected away ~~either~~ with the scissors or destroyed by the application of caustic Potash, and the dressings continued. Should there yet be lurking a disposition to assume the granulatory action, or ~~the~~ to put on the appearance of a healthy sore, Ricord has recommended the introduction of the Pulv. Cantharidis so as to produce the necessary degree of excitement.

In the treatment of a case which fell under my observation, I saw the Massa Hydrarg. exhibited in the dose of ten grains night and morning during

seven days, in which time the surface of the Bubo had been blistered, which when dry an ointment of Ung. Hydrarg. & Iodine was freely rubbed in; after that, recourse was had to another ointment composed of Ung^t Hydrarg and the Ext^t Belladonnæ: these in a very short time had the effect of reducing the whole chain of glands from an enormously swollen state to their natural condition. It will be proper to observe that under the Mercurial course this patient became pallid and thin; was excitable from causes which before failed to produce any effect, and became subject to nocturnal sweats which were of an extremely exhausting nature. To relieve this he was placed upon a course of mineral acids and tonics; and rapidly recruited. In this case the Bubo did not go on to suppuration.

In the so called secondary symptoms of the disease, great attention is required to treat the disease promptly, and an established cure is necessary to prevent mischief to the system. In these forms of disease Mercury

is peculiarly indicated, for in the affections of the throat and the lenticular and other eruptions, great benefit has been derived from its exhibition. In the sore throat which has been described, I have seen the ulcers and inflamed parts touched freely with the Nit. Argent. and at the same time the decoction of Sarsaparilla, Mezereon and Guiac was given with the ½ of a grain of the Bichloride of Mercury: after repeated touches with the caustic, the parts assumed a more healthy hue and the voice which had been rendered thick from the engorgement of the tonsils assumed a more natural character. This treatment has succeeded without resort to any other preparation. Sometimes it so happens that the Bichloride of Mercury produces colic and visceral irritations, in which case the Mass Hydrarg may be substituted.

Great benefit has been claimed from the decoction of Zilman in my section of country and multiplied cases of the secondary and tertiary symptoms, have been adduced by a vender of it, which after

There is one form of Mercury which has been most advantageously used in the tertiary stages of this malady and which has also been used with beneficial results in this phase. I allude to the Proto Ioduret of Mercury combined with Opium, Ipecac and Guaiac, so as to exhibit one grain once a day.— A case has been mentioned by a respectable practitioner of this place (Norfolk Va) in which the lenticular scales were seated upon a cottery base, in this case the Proto Ioduret of Merc was used with the most flattering results.

Syphilitic Iritis. Mr Lyrell in his work on the diseases of the eye declares it as his opinion that he cannot allow that Idiopathic, Traumatic, Syphilitic and Rheumatic Iritis are distinct diseases, but one and the same affection generated by different causes. He deems Mercury almost a specific in these diseases. During the inflammatory condition of the organ, the most rigid antiphlogistic treatment must be observed, venesection must be practised to the extent of moderating the momentum of the circulation,

then topical depletion by leeches or cups about the temples, over the eyes and around the lids. Cathartics of a drastic character should be avoided, and the mercurial purges should be guarded with Opium for the double purpose of making its specific impression upon the system. Mercurial ointment should be rubbed in upon the inside of the thighs and legs. The diet should be spare, and the room darkened. For the purpose of preventing the pupil from becoming fixed and assuming an irregular appearance, the occasional use of Ext Belladonna around the course of the Orbicularis muscle should be practiced, or a solution of the strength of two grains to one drachm of distilled water, should be dropped occasionally into the eye.

In the cure of the irregular excrescences it would be advisable to exhibit the Ptisan of Zittman accompanied with the Bichloride of Mercury or the pills of Proto iodurret of Mercury with Opium and Guaiac until its effects are manifested in the mouth. Care should always be paid to the

general health of the patient especially if he be of a scrofulous habit, and Iodine together with Iron and some of the tonics conjoined with the sea bath should be used.

The Syphilitic Sarcocele requires a Mercurial treatment steadily kept up with the occasional application of leeches along the cord, together with the inunction of Ung. Hydrarg. or the Proto Iodure of Mercury. When pain is manifested, the part should be enveloped in an Opiated emollient cataplasm or pressure may be made by surrounding the part with adhesive straps. When this treatment fails the knife is the forlorn hope. In the affections of the scalp and nails the usual constitutional remedies must be had recourse to. The head is to be shaven and some stimulating application must be used. Ricord has suggested that the nails should not be pulled out as in a simple Onychia but should be taken away as they seperate themselves from the Matrix.

The diseases of the bones and sclerous

membranes which constitute the tertiary condition of Syphilis, are to be treated by constitutional and topical remedies. Those Rupia and Syphilitic tubercles of the skin affecting the Ala Nasi &c, are properly met by the influence of Mercury and Conium as constitutional remedies and emollient applications as Cataplasms and opiate fomentations. When they assume foul and unhealthy aspects, it would be proper to use the Chlorinated alkalies and the occasional use of the Nit. Argent or Mercury. Those pains simulating Rheumatism and which are most distressing at night are also to be treated with Mercury as an alterative combined with Opium & Ipecac. The Fowlers solution of Arsenic in those cases which have run into foul nodes &c as well as the Nitric Acid with the decoction of Cinchona are useful, but the greatest reliance may be placed in the Iodide of Potassium given in large doses. Blisters applied to the seat of pain are spoken of favourably and opiated cerate for a dressing has been found to remedy all the unpleasant

sensations. Nodes which run on to suppuration often give much trouble, the previous treat=ment should be some opiated discutient as the Iodide of Lead or Tincture of Iodine painted upon the surface. When the Node suppurates it is always better to make a free incision into its long diameter and allow the pus to flow out; simple dressings are to be applied. When the bones are involved the Iodide of Iron and vapour baths afford much relief. Blisters near the affected parts, by revulsion have given considerable relief to the patient. The continued use of the decoction of Sarsa=parilla has likewise been used with great success by the late Dr Dewees and the solution of the Iodide of Potassium, I have seen produce some of the most remarkable cures in the hands of some of our own practitioners.

An
Inaugural Dissertation
on
Cataract
Respectfully Submitted
to the
Examination of the
Provost, Regents & Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Frank L. Partridge
of Baltimore
Md.

BREVITAS. old play.

By the word cataract we designate any opacity, more or less, of the crystalline lens, the capsule of the lens, or of the liquor Morgagni which is contained between the capsule and the lens. These are affected with opacity individually or severally at the same time, and according as this may be, have been termed 1. Lenticular. 2. Capsular. 3. Morgagnian 4. Capsulo Lenticular cataract. There are various names given to other forms of cataract, but they have reference for the most part, merely to some peculiar form or appearance which the opacity may present. Lenticular cataract is divided

moreover into hard and soft.
The hard lenticular cataract is almost invariably met with in persons of an advanced age. In this variety the opacity commences in the centre of the lens and diminishes in intensity towards the circumference. The colour is usually that of a greyish amber, especially at the centre of the lens. We generally find the lens much shrunken and decidedly smaller than when healthy. and it is owing no doubt to this circumstance that the motions of the iris are so little interfered with in this form.
The soft or fluid cataract is the form generally met with in middle aged persons. It differs from the hard variety in consistence. Colour and size. It is much softer

sometimes almost a perfect liquid, and instead of the greyish amber colour. presents one which resembles very closely that of a mixture of milk and water. The lens here is much larger than when in a natural state. and owing to this impinges upon the iris and almost entirely destroys the motions of the iris.

Capsular Cataract is divided into anterior and posterior. The anterior portion of the capsule is much oftener the seat of opacity than the posterior. It presents a light glistening appearance bearing a close resemblance to that of pearl. The opacity is not always uniform but often appears streaked or spotted. The posterior portion of the capsule is seldom affected

alone, yet it does sometimes happen. It presents a dull yellowish colour, which is obviously deep seated. The motions of the iris are seldom interfered with in either of these forms.

The Morgagnian cataract. In this variety the liquor Morgagni presents a turbid, cloudy appearance, and sometimes appears as if a number of flakes of the altered liquor were floating before the lens; if the eye be rubbed with the finger these flakes may be seen to change their places. This form is exceedingly apt to interfere with the motions of the iris, caused by the distended capsule pressing upon the back part of it. Patients are able to distinguish bodies of a large, tolerably well in

this variety
Capsulo lenticular cataract consists in opacity of the capsule and lens simultaneously. In fact we almost always find the capsule more or less involved in opacity of the lens. The lens may be either hard or soft in this variety. When soft it is more apt to impede the motions of the iris. It is said that congenital cataract most frequently presents itself under this form. Sometimes, if the opacity is not too general the patient is enabled to see a little by the application of belladonna to the eye.
Causes. Cataract is very often a sequence of some injury done the eye by external violence such as a blow inflicted upon that organ. or some sharp

pointed instrument (as frequently happens with children) being thrust into it. Sometimes the lens seems to undergo spontaneous changes similar to those met with in other parts of the body in old age. Mal nutrition is also one of the most common causes. Those persons appear especially prone to this disease who have their eyes exposed for a long time to a strong, glaring light. Blacksmiths, forgers, iron smelters, &c are likewise amongst its victims, owing to the extreme heat, causing to coagulate the albumen, which constitutes a large part of the lens. Congestion of the blood vessels of the head seems to be another great predisposing cause. Cataract is supposed by some to be congenital

and it is also said to be an hereditary disease.

Diagnosis. The diagnosis of cataract is by no means a difficult matter. especially if the disease is somewhat advanced. In the earlier stages of the disease it may sometimes be mistaken for amaurosis or glaucoma. and a wrong diagnosis between the two would prove most unfortunate for the patient. because it is in the earlier stages alone of amaurosis that we may hope to be of any assistance. whereas in cataract it is after the disease is fully established that we apply our means of cure. In amaurosis the appearance is more a paleness than an opacity. and is much deeper seated. This paleness is not proportionate to the decline of

vision. whereas the opacity in cataract is. In amaurosis the pupil is usually dilated and the iris seldom if ever movable. when a strong light is brought near the eye. In cataract the pupil is nearly natural. and if a lighted candle be brought near the eye the iris readily contracts. We have also the octopatric test proposed by M. Sanson.

Treatment. Medicines are of no avail in this disease. especially if it has made any progress. It is from Surgery alone that we may expect a perfect cure. and its value for the cure of this disease alone is beyond all estimate.

"A wise physician skilled our wounds to heal
Is more than armies to the public weal"

The operations for the removal of the opaque lens from the axis of vision are three in number. 1 depression. 2. absorption & 3. Extraction. Each of which is equally lauded by different operators.

Depression consists in the removal of the lens by forcing it down from its natural position into the posterior chamber of the eye. The couching-needle is generally used for this purpose. To accomplish it the patient is made to sit upon a stool, somewhat lower than that which is to be occupied by the surgeon. his face being towards a window. with his head resting upon the breast of an assistant. and the healthy eye concealed with a bandage. The surgeon now seats himself in front of the patient. an

assistant retracts and steadies the upper lid. whilst the surgeon steadies the lower. Every thing being ready for the operation the surgeon "saisit son aiguille comme une plume a écrire" and pierces the sclerotica horizontally. at the distance of two or three lines from the cornea. The needle is then passed on until it reaches the upper part of the lens, that body is then pressed upon in a direction downwards and inwards the cheek bone acting as the "point d'appui" The needle is still held in contact with the lens after it has acquired its new position, in order to allow the vitreous humour to entirely surround it, and thus prevent its return to the axis of vision. The needle is now withdrawn

and the eye being dressed as circumstances may require. the patient is allowed to lie down in a room slightly darkened, and the eye made to be kept at perfect rest. Unpleasant consequences sometimes follow this operation viz. the lens assumes its former position. or if not, in its new one produces some injury to the eye by the pressure which it there exerts. But these accidents are of such rare occurrance, that they should seldom if ever prevent the performance of the Operation.

Absorption. This operation is particularly applicable to the soft cataract. The patient is placed in the same position as in the previous operation. the needle is passed into the

eye until it reaches the lens precisely as before. After the needle has thus reached the lens the capsule and the lens itself ~~is~~ carefully divided in several places. and the several broken pieces allowed to flow into the anterior chamber of the eye where they will be absorbed in in a short time through the medium of the aqueous humour. If the cataract be of the soft variety, one operation will suffice but if it be of the hard variety it may require two or three operations to effect the entire removal of the lens. The objections to this operation ~~are~~ that it often requires more than one operation to accomplish the cure. and that it takes a long time to effect the complete absorption

of the lens. This is the operation which is generally performed especially in this country.
There is a modification of this operation called Keratonyxis. Which consists in the introduction of the needle through the cornea instead of the sclerotica. But this operation is far more dangerous than the other. being exceedingly apt to wound the iris. and as there is no particular advantage to be derived from it. it is seldom performed.
Extraction is the complete removal of the lens from the eye. by means of an incision made through at least one half the circumference of the cornea. close to the sclerotica.
The patient is seated as in the other two operations. After the incision

has been made. an instrument called the cuette is passed into the eye through the wound. by means of which the capsule is completely divided. Gentle pressure is now made upon the ball of the eye externally. and in this way the lens is forced out through the incision through the cornea. The consequences of this operation are of a more serious character. than those of either of the others. and hence it is comparatively, seldom performed. There is more inflamation. ulceration may take place, or the lips of the wound may be obstinate in healing. and many other such accidents. There should be the greatest confidence on the part of the operator as well as steadiness on the part of the patient. No one should undertake the operation. previous to

having performed it a number of times upon the dead subject. For should he begin upon the living subject. he will be apt to spoil a "hatfull of eyes" before he shall have once accomplished the operation successfully.

Previous to any of these operations the surgeon should be certain his patient is labouring under no constitutional disease which would in any way tend to clash with the success of the operation. such as gout - rheumatism. and especially colds attended with violent sneezing. The attention should be directed also to the digestive organs. and some aperient medicine given - Venesection is sometimes of great assistance. especially in persons of a plethoric habit. It sometimes happens. nevertheless. that every effort

to succeed is rendered utterly useless by some unforseen accident. and we are compelled to acknowledge the truth of "quanti casus humana rotant"

An Inaugural Dissertation on Scrofula.

Submitted for the Examination, of the, Provost Regents & Faculty of Physic, of the University of Maryland, for the Degree of Doctor of Medicine, By,

Andrew P. Ebaugh, of Maryland.

Feby. 1848.

To

Nathan R. Smith, M.D.

Professor of Surgery,
in the
University of Maryland,

This Essay is Dedicated,

As a testimony of high respect

For his great Professional Attainments,
By the,
Author.

Scrofula.

Perhaps there is no disease whose precise nature and origin, appears to be less understood and less successfully treated than that of Scrofula.

It is a disease of the system in general, of the glands particularly; as it is in those parts that we most frequently meet with it, which is owing, I beleive, to some morbid affection of the absorbent system.

It generally discovers itself in those persons who are of a debilitated appearence, and characterized by fair complexion, large heads, contracted chest, light or red hair, soft and flaccid muscles, rosy cheeks, thick lips, languid circulation, blue veins, a well developed forehead, eys generally of a light color, accompanied with a large pupil.

Sometimes it makes its appearence in those whose complexion are dark, with dark hair, and whose eyes are of a hazel color.

Persons of a scrofulus diathesis are of quick comprehension and precocious mind, and they are generally lively and immaginative. It not unfrequently shows itself in persons who exhibit none of these signs, as is found to be the case with those of the Phlegmatic variety. In this second or phlegmatic form the aspect is dull and unpromising, the hair is dark, the skin thick, the eyes greenish or hazel, with dilated pupil, and the abdomen mostly tumid.

In each variety the functions are more or less irregularly performed, the digestion is generally weak, sometimes the appetite is excessive, sometimes deficient, and, an almost constant desire for some indigestable article of food.

In some again,— puberty seems to be anticipated, the sexual passion strong before, there is sufficient bodily strength to permit it to be indulged in without injury. This is often the case with

females who are usually remarkable for early beauty, which arises from the great developement of adipose tissue.
In the Phlegmatic, on the other hand, the growth of the body is often stunted.
As it is a disease exhibiting itself in various ways and in various parts of the human frame — the question would naturally arise. What is Scrofula, what is its origin, and what is its cause?.
For me to enter into the history of all the supposed causes &c of this disease would be an attempt, entirely useless, therefore will content myself with saying that I believe it to be a disease of debility and appears to be promoted by whatever debilitates, or weakens the system.
Hence it generally affects those whose constitutions are more or less enfeebled: probably transmited to them by their, predessors, whose Systems may have been impregnated with some disease, the

peculiarity of which may be the predisposition to disease of their offspring, or it may arise from great depression of the general health, occasioned by some other disease: for instance, some of the exanthema, Small Pox, Scarlet Fever, Measles, &c more especially if the persons thus affected have been the subjects of too bold and wanton administration of mercury, or from a fearless and imprudent use of the lancet, which would only tend to a long and tedious convalescence, and thereby, plant the seeds of Scrofula or some other formidable malady.

It is a disease which may remain latent in the System for a number of years, probably not appearing till the next generation, and then may present itself with all its train of evil, progressing if not arrested by some beneficial interference to a fatal termination.

Scrofula is supposed to arise from the elimination of some peculiar morbid deposit of the fluids, which appears to be of the nature and consistence of lymph, found in round bodies, known by the appellation of "tubercles".

These tubercles may be found scattered through the substance of the lungs, which may terminate in that lamentable and destructive, disease, phthisis pulmonalis: in the brain, or embedded in its substance laying the foundation of Hydrocephalus: in the mesenteric glands, giving rise to what is termed tabes mesenterica: in the lymphatic glands in general: in the cancelli of the bones: in the pleura, peritoneum &c.

They may remain in a quiescent state for a period of time, not destroying the structure or function of an organ or tissue, unless through some accidental or mechanicle, interference, the second, or ulcerative stage is brought into action: then the sur=

rounding tissue inflames and forms an abscess, which contains the tubercle softened and broken down by effusion of serum and pus. After awhile the abscess bursts and permits the tubercle to escape, then the surrounding tissue may contract and a cicatrix may be formed.

Sometimes a spontaneous cure takes place, by being converted into an earthy or chalk like substance, which may remain inert for years, and probably for life.

But in unfavorable cases the tubercles continue to ulcerate and discharge matter, which may burrow and decompose every thing within its course, till the patient, becomes worn down and exhausted by excessive discharge of matter: when ultimately death happily puts an end to his suffering.

In regard to the origin of tubercles, we are told, by Physiologists, that they are produced by an undue elaboration of the fibrin of the blood.

<u>Causes of Scrofula</u>. It may be transmitted

from family to family, by an hereditary succession, yet, like other hereditary tendenc-ies, may skip over one generation, and reappear in the next, just as family like-nesses are known to do. It may also pro-ceed from a Scrofulous nurse, or it may come on from those parents whose constitutions, (as before stated) have been greatly impaired by Small pox, Scarlet fever, & Measles.

In short whatever vitiates or corrupts the humors or relaxes the solids, seems to pave the way to this distressing disease.

Among other causes, I beleive that the Syphilitic affection, bears no very small part in its production; we are also taught, that pa-rents, whose Systems have been saturated with this dreadful virus, may, and in all probability, do transmit its peculiar morbific and deleterious properties to their offspring, thereby propagating in their Systems the Scrofulous diathesis.

Next, though not least, in importance is the

deprivation of the Solar light:- we know that light acts as a vivifying or vital stimulus to living beings; we know also that light promotes the developement and nutrition of plants; without it they become pale, brittle and colorless; But on the other hand if they are permitted to grow in the light, contributes greatly to their strength, color & odour, It has analagous effects upon man and the lower animals and if deprived of its influence, droops and becomes unhealthy and even sometimes die.

Now when man has been long confined, in dark dungeons, his whole complexion, becomes, Sallow, languid, & anemic, and not unfrequently a peculiar pustular eruption, appears on his surface, Such being the case, it would appear at a moments glance, that the deprivation of Solar light, certainly exercises a very decided influence in the production of this disease: therefore it seems most prolifick in those countries

where heavy taxes are imposed upon Glass. Consequently, that article being out of the reach of the poor, on account of its high price; and thus depriving them of the renovating influence of light. likewise, the inmates of prison who if not permitted to exercise in the open air, will in like manor, be rendered a prey to its ravages.

Exposure to cold damp situations, where the atmosphere, is contaminated with some noxious effluvia. will strongly promote its abolition. Confinement in close, illy ventilated departments, as in the close confined air of towns. Low diet or rather insufficient nourishment, which is found often to be the case with the poor, who are confined, or rather, compelled through poverty, to a scanneness of food, such as potatoes, oatmeal and other farinaceous, substances.

Nor are the rich exempt from its ravages who partake too copiously of rich gross and stimulating food. In a word, any thing, that

tends, to keep up a disordered condition of the digestive organs, may prove the exciting cause. Injuries or blows may also bring it on, but only, as would be supposed where there is a predisposition to it.

Besides these, I have one other cause to add to the list, which bears no very small share, in generating this disease; I mean the influence of climate. Now, it is believe by most writers, that climate, certainly exercises a very decided and powerful, part, in its production, and appears to be proportionate, to the coldness and dampness & variableness. Hence the frequency of strumous affections during the winter month of this and other climates of unequal temperature: and hence, its rare occurrence in those climates of more congenial and equable degrees of temperature, as the Wilds of Madeira, east and west indies &c.

These districts of country, considered physiologically, would be the proper climate for those of the strumous diathesis, to resort to.

General Treatment. In the general treatment of Scrofula, great advantage is derived from a nourishing and invigorating diet. It should be nutritious and digestable, taken frequently, and consisting of the farinaceous substances, with a sufficiency of good fresh meats, and occasionally we allow, beer and good wine to promote the assimilation and digestion of the food: premising however, that some caution should be observed when using this agent, otherwise it might create some cerebral disturbance.

The clothing should be warm and adapted to the season and climate, so as to avoid colds and coughs, and to keep up a cutaneous circulation, thereby preventing congestion of the chest.

Among these flannel seems to exercise a very salutary influence, in obviating many of the injurious effects of the climate in which we live. It should be worn

nest to the skin — in winter for direct warmth, and in summer, to avoid the accidental changes of temperature that will necessarilly happen.

Free exercise of the muscular system and respiratory apparatus, in pure open air is very salutary, it accelerates the venous circulation, promoting the compression of the abdominal viscera, by the contraction of its muscles, (as pointed out to us by a distinguished author) by this means encouraging the action of the portal system and thus preventing costiveness.

The exercise should not be carried to too high a degree, so as to fatigue, but it should be taken voluntarilly, and at will.

Climate cannot but in a few instances be changed, but those who are able should seek a warmer one, without being very damp or variable in winter; and cool and refreshing in the summer season.

Washing and friction of the surface appears

to be very beneficial to the Scrofulus.

Cold Sea bathing is also of great importance in this disease, though some caution ought to be observed in its application, the constitution must have vigor enough to support the shock, accasioned by the immersion.

In some cases the warm salt bath may be useful, but there are but few cases that will not be benefitted, by the sea bath judiciously managed. But in all cases bathing will be injurious if a slight immersion renders the surface cold, pinched and numbed, and where reaction takes place slowly.

Medical Course of treatment. First if there appears to be much emaciation and exhaustion, the tone of the general system must be restored. In order to effect this the decoction of bark, or its active principal, Sulp. quinine and the chalybeates are strongly indicated.

Secondly, If the patient complains of heart burn thirst, red tongue, and craving of

food soon after meals: magnesia may be given to allay irritability — and alkalies to neutalized, the acrid secretions of the stomach and bowels.

Our next object is to keep the bowels regular; but taking care not to over purge the patient as it would only prostrate the patient, and thus retard our efforts. If the stools are not properly tinged with bile, mercury in some form or other may be given. The pil hydragyri, combined with Rhei and Soap, answers very well, and will likewise act as a mild aperient. But recollecting however not to use it too extravagantly, as very bad effects may result.

Now these preparatory steps having been fulfilled (if required) our next object will be to endeavour to check its course, or if possible to eradicate the disease from the system. The truth is we know but little of the nature or cure of this affection, and where reason and medicine both fail, superstition

always comes in their place. Hence it is, that in diseases which are the most difficult to understand, we generally hear of the greatest number of miraculous cures, being performed.

However those medicines which appear to come nearest in accomplishing this very important object are the following.

Iodine. This substance stimulates the glandular and absorbent system to action, and thus dispessing tumors, and promoting the expulsion of the morbid matter. It is best given in combination with a metal or an alkali. The ferri iodidum, is a valuable preparation, where their is a soft, and relaxed condition of the solids, and paleness of skin; it should be given in doses of two a three grains, three times a day, and continued for some time if the stomach will permit;—at the same time we occasionally give an aperient to releive constipation.

The hydriodate of potash in doses of ʒ ss to ʒ i three times a day answers a very good purpose

indeed I dont know of any other preparation superior to it, Burnt Sponge, Cod's liver Oil, Chlo-of Lime, and decaction of walnut leaves, are said to do good occasionally.

The next remedy deserving of our consid-eration, is the Sarsaparilla. This article often produces a most beneficial effect. It is given in form of simple or an alkaline infusion, or in the form of decaction, combined, ~~xxxxxxxxx~~ with guiacum. Its modus operandi, cannot be explained, but it often produces a most unlooked for good effect especially when the System is weak and irritable, and when other tonics disagree.

But of all medicines, Steel continued for a period of time, with an occasional intermission, and good nutritious, and whole some food:- pure air, and warm clothing are the most important of all known remedies against this affection.

An
Inaugural dissertation
On
Hydrophobia.
Submitted to the examination
of the
Provost, Regents, and Faculty of Physic
of the
University of Maryland,
for the
Degree of Doctor of Medicine,
By
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An Essay on Hydrophobia

By

J. J. Culler

There is not in the whole domain of disease, perhaps, another malady, which in point of age, extent of fruitless investigation, and uniform fatality, can claim a parallel with the one we have selected as the theme of our inaugural dissertation. Neither talents nor exertions have been wanting, aided and energized by the noblest dictates of humanity, to unmask its latency of character, and place Hydrophobia, as a brilliant trophy, upon the triumphal car of the Genius of our profession. Yet after all, a vast deal remains to be discovered ere this most fatal disease will have become subject to scientific control. It is to be hoped that the labor of succeeding centuries will not be so barren of recompense, as those which have gone by; that the experimenters, and philosophical inquirers after knowledge at this day, will in no wise be disheartened by the constant failures of their honored predecessors; and that the glorious epoch will burst upon the world, when the cause, and prevention, and cure, of every known or concieveable malady will be fully recognized, and the healing art have advanced to a state of absolute perfection. But to our subject.

What then is Hydrophobia? Literally it signifies a dread of water; but in the sense we are about to employ it, it is possessed of a much wider import. In medical nomenclature it stands as the representative of a disease characterized by violent and intermittent spasms of the muscles of respiration and deglutition, together with a peculiar irritability of the body, and often much cerebral disturbance. A great deal of unnecessary display has been made by authors in endeavoring to prove the inappropriateness of the name, and in assigning one more conformable to scientific accuracy; but in the present state of our knowledge of nervous disorders, and especially of the one we are considering, we retain the old appellation, because we think it as significant as any other, and are persuaded that it can neither embarrass our practical operations, nor retard the progress of pathological research. In truth, it matters very little by what name we recognise a disease provided no erroneous idea can be conveyed thereby

regarding either its aetiology or pathology.
It has been argued, however, that, as the dread of liquids is not universally present in every case of canine madness; and moreover that it is an anomalous symptom not unfrequently arising in the progress of certain other complaints - that therefore the term Hydrophobia is objectionable, and should give way to some other name from a less objectionable source. This idea is true, and has some speciousness; but in almost all the cases related by authors this dread of liquids is particularly noticed; and, moreover, we think the term we use preferable, both because of the wonderful singularity of the symptom from which it is derived, and of the impossibility of fixing upon any other of more precise and definite significancy. It would be idle to discuss the relative value and fitness of the many terms employed to designate this disease - for they are more numerous than the titles the most erudite academician can parade; and we will quit this part of the subject with the single-

observation, that since so many names have been suggested for this disorder and are all well understood, we will, to prevent too much circumlocution, use such with freedom as circumstances may require. Hydrophobia is emphatically a disease sui generis. With so many facts to prove its individuality, and establish the truthfulness of the proposition, that it is produced and propagated by some subtle animal poison, it seems surprising that any one could resist conviction. Yet it has been a matter of inquiry with some, whether rabies does not result from a highly excited and overwrought imagination, altogether independent of a specific virus? and what is still more strange the doctrine has been announciated, that the idea of a Hydrophobic virus is an absurdity, and the existence of a contagious disease propagable therefrom a vain chimera. What a tenet! To deny the existence of a malady of which the world has taken cognizance for a period of time, equal almost to the duration of the medical science it self is truly astonishing;—

but when we see that such a negation has not only been made, and that in defiance of the mighty accumulation of testimony confirmatory of the substantiability of a poison most fatal to life, the grave assertion has been hazarded that all this is fiction, our surprise ends; for the conclusion is irresistible that so much folly is but the offspring of a lunatic brain. Admitting the spontaneous occurrence of rabies to be an indisputable fact, to what consideration would this doctrine be entitled? Could Hydrophobia possibly originate in an excited or disordered state of the mental functions, the paucity of cases would constitute a problem difficult of solution. On every hand we should see sights of horror and scenes of woe; phantoms of death would be lurking in every cup; the bowl of the reveller would disclose new shapes of hell; madness would glare from many an eye, and Hydrophobia have become a scourge more terrible than the plagues of Pharaoh. What are the facts?

Twenty-three individuals were bitten one morning by a female wolf of whom thirteen died in the course of a few months, besides several cows which had been bitten by the same animal. How could all these persons have had similar symptoms, and especially a horror of fluids, had they not all been under the influence of same cause besides the bites? The patients who died were bit on the naked skin; while in the others, who escaped infection, the bites happened through their clothes. In an essay by Le Roux, mention is made of three persons bit by a rabid wolf near Autun in July, 1781, and notwithstanding mercurial frictions they all died of rabies. Of ten other individuals bit by a wolf nine died rabid. Twenty four persons were injured in the same manner near Rochelle, and eighteen of them perished. On the 27th January, 1780, fifteen individuals were bit by a mad dog, and attended at Senlis by the commissioners of the French Royal society of Physic: ten had received the bites on the naked flesh, and

fire through their clothes. Of the first ten, only five lost their lives, three of them dying of decided rabies between the 27th February, and the 3d of April; and the other two between the 29th of Feb. and the 18th of March.

Now if these different statements collected from various sources be entitled to credit, do they not establish in the very face of scepticism the positive fact — that Hydrophobia is not only a disease producible by a certain infectious principle independent of a distempered imagination; but that that principle is so virulent in its nature, and so little subject to control as to demand the utmost caution against introduction into the animal system, wherever safety from its lethiferous influence is desired. Corroborative of all this is the certainty of infants having died of rabies, and of numerous animals of various species, in whom no such fanciful phrensy could be excited; having fallen victims to the same dread malady;

Symptoms in the Dog:- The first symptom usually observed in this animal is some strange peculiarity in his behavior, a striking aberration from his accustomed habits, - such as a disposition to pick up and carry various litters, bits of straw, rags, paper &c. A fondness for cold sensations is sometimes characteristic, as they are prone to lick cold iron, stones, and other like substances. An unusual irritability of temper, which is readily excited by the appearance of strange dogs and cats, and made furious by threatened violence with a stick or whip. With these there is commonly shyness and melancholy. He avoids society, refuses to eat, and seems to have lost all his vivacity; his tail and ears drop; his eyes become fixed and he looks haggard and dejected, and as his disorder progresses he is inclined to snapping at surrounding objects. In sheep as well as dogs a peculiar change of the voice is regarded as one of the most unequivocal signs of the distemper. As regards the disposition to bite it has been calculated by Dr. John Hunter that out of every dozen of rabid dogs about one evinces no such tendency.

In the second stage of this disease, his respiration becomes embarrassed and laborious; his mouth stand open, and there is a copious secretion and flow of viscid, frothy saliva, accompanied with fever and inflammation of the throat and fauces. The peculiar dread of liquids which is so generally present in this disorder as it affects the human subject is proven, from ample observation, to be often wanting in the dog, and indeed has been asserted to be never manifest. In some parts of the country, however, the opinion is prevalent that a dog that laps water, or is not thrown into a paroxysm of madness by every approach to it cannot be rabid. Others again suppose that a dog to be mad must exhibit signs of the utmost ferocity, and frantic distraction. It is to be regretted that errors of such magnitude exist, the more especially since they may lead to fatal results by removing suspicions and apprehensions of danger which are really well founded and just. Nothing is better calculated to remove this vague supposition and dangerous fallacy, than the publication of the truth touching this matter.

In no instance, remarks a very intelligent writer and one of experience, have I ever observed a total alienation of mind; in very few have the mental faculties been disturbed. The disposition to do mischief is rather an increased irritability than absence of sense; for in most instances even those that are furious acknowledge the masters voice, and are obedient. The belief is also entertained, by some, that the wilder animals are more frantic, than those more domesticated. Whether this is really correct we have no means of determining; but certain it is that we have some accounts of dogs whose rabid fury was of the extremest grade. As this, too, is a topic of trifling interest and of no practical moment whatever, we will not be delayed by its consideration, but proceed to notice the progress and termination of this disorder in the canine race. Progress and termination.
When the disorder is once fairly established, it rapidly advances through a series of successive paroxysms to a fatal termination. The animal mostly refuses all sorts of nourishment, and if ever is now morose and sullen.

Unless confined at this time he generally wanders from home, and his course is then as fearful as that of a devastating pestilence. Herds, flocks, beasts, and men are oftentimes the victims of his mad rage; and thus he moves spreading death and terror in his career untill he expires from exhaustion or is dispatched by the hand of his pursuers. We are told, by Mr. Jonatt, that a rabid dog never has fits, and that the existence of epilepsy is a clear proof that there is no rabies. It is not our wish to confound epilepsy with rabies; and to present misconception as to the nature of the paroxysm mentioned above, we will here state that what was intended to be conveyed by that term had reference to exacerbations of the peculiar irritability with which he is affected, rather than to any fits suspending consciousness and voluntary motion. During the course of this malady the animal is seized with paralysis of the jaw which is more or less complete in various instances; and perhaps also often attacks the loins and extremities.
In this condition the animal staggers about, totters, and frequently falls; and from four to six days-

of a most miserable existence are dragged out, and the scene closes occasionally with slight convulsions, but oftener without a struggle.

Its generation de novo.- Various points connected with our present subject are still involved in most perplexity and doubt. While some contend that this disease may and does spontaneously occur, and that too with frequency, by others the possibility of any such origin is strenuously denied, and its occurrence ascribed solely to inoculation with a specific poison. Now, from a fair examination of the testimony adduced, and the experiments instituted, we think the side of its origin de novo utterly untenable. Every conceivable state or condition, which conjecture devised might give rise to its development, was brought to bear with all its influence upon unfortunate animals employed to test the correctness of this theory. Might it not be hatched by excessive heat? At the Veterinary School at Alfort, three dogs were subjected to some very cruel but decisive experiments.

It was during the heat of summer, and they were all chained in the full blaze of the sun. To one salted meat was given; to the second water only; and to the third neither food nor drink. They all died; but none of them became rabid. Again the concurrent testimony of writers establishes the fact, that in many hot countries, such as Egypt, Jamaica, certain South American provinces, the islands of Cyprus, and Syria, this disease is scarcely known; and with us, all are acquainted with the fact that Hydrophobia happens as often in the spring and Autumn as at mid summer. But, perhaps, this poison is generated by bad and putrid food, and confinement in filth and hastiness? Dupytren, Magendie, and Breschet, have purposely kept many dogs, for a long time, in the most disgusting state of uncleanliness, let them even die in this condition, for want of food and water, or even devour each other, yet without exciting rabies. So far as I have been able to examine, no case of rabies has ever been—

engendered in the canine race by artificial means, nor has it ever been proven to result spontaneously from a combination of natural causes. Such being the fact we are forced to coincide in sentiment with the learned Gouat, who avers that Hydrophobia always results from the introduction of a specific virus into the System. It were a happy circumstance if experimenters, in the course of their investigations, had discovered the essence of this poison, - had shown of what its virulence consists. But this too, alas, has defied all scrutiny. There is a difference of opinion even as to whether the lyssic virus is blended with the salivary secretions or bronchial mucous. Will any-one tell where this virus is matured, and where eliminated? All we can do is to deplore our ignorance, and look forward to the dawning of a better day, and a more glorious era, - a day and an era when but little, if any of that which is now obscure and incomprehensible, will remain in darkness by eluding the searching tests of the analytic art.

Symptoms in Man.— In coming now to describe this disease as it affects the human subject, we will trace it from its incipiency to its termination. In doing so we will have to consider the three phases it presents, according, as it may be in either one of the three stages,— of incubation, recrudescence, or complete development. An individual, then, is bitten by a rabid animal; and the wound is either neglected or improperly treated. No alarming effects are at the time apparent, and cicatrization is effected by the natural process in the usual space of time, and all seems well. After the lapse, however, of an interval varying in duration from forty days to two or three months, and perhaps upwards, the attention of the patient is called to the old neglected wound, by some singular sensation experienced there; or a tingling pain extending towards the trunk, attended with discoloration of the skin, covering the part, and sometimes a papular eruption discharging a peculiar ichor. This is called the period of incubation;— i.e. the time from the first insertion of the poison to the earliest manifestation of its effects on the body.

Now the appearance of the above phenomena in the bite indicate that the canine virus is fast extending its ravages over the system, and mark the period of recrudescence. From this point the disease steadily advances, untill the specific constitutional symptoms begin. He is then hurried and irritable, says Watson; speaks of pain and stiffness, perhaps, about his neck and throat; unexpectedly he finds himself unable to swallow fluids, and every attempt to do so brings on a paroxysm of choking and sobing of a very distressful kind to behold; and this continues for two or three days, till the patient dies exhausted, in the way of asthenia. Of the length of time during which the Hydrophobic virus may remain inactive in the body, much diversity of opinion exists, and some have stated periods whose extent exceeds all credibility. Dr. Bardsley of Manchester, for instance, has recorded a case, which, after the most diligent inquiries to ascertain the truth of the matter, he declares to have been rabies proceeding from a bite inflicted-

twelve years before. Other cases are on record, which, it is pretended, were in the state of incubation for eighteen, twenty, thirty, and even forty years. Now when ~~we~~ we know and reflect that the absorbents are ever active in taking up and conveying into the circulation whatever may be exposed to their action in any portion of the body, and that this virus could not escape absorption if even deposited within the range of capillary influence, we close to regard such accounts with distrust, and refer the cases to some incidental origin.

In the last stage of Hydrophobia, the singular symptom which has given name to the disease, is very generally present, and water or liquids, either offered as a beverage, or agitated near the patient produces the most pitiable distress. Spasms of the muscles concerned in deglutition, and of the small ones about the larynx, supervene upon almost every attempt to swallow liquids; and it is only with the greatest exertion of volition that the patient can swallow the least portion of fluid.

It is remarkable that in the worst stage of the disorder the intellect of the sufferer is seldom disturbed; but that to the last he possesses his mental faculties unimpaired. Indeed it is said that sometimes the mental operations are rendered more acute; and occasionally too raised to delirium. This last condition, however, I believe always arises towards the termination of the disorder, and is then present to the last. When rabies has become fixed in the system, the miserable victim has added to his distressing thirst, a peculiar secretion of tenacious and viscid mucous from his throat and fauces, the accumulation of which, in the air passages and mouth, is constantly provoking him to hawk and spit. Is this product capable of begetting the disease; or is it charged with the specific virus of Hydrophobia? Many, very many experiments have been performed with the view of ascertaining this fact; and the great mass of evidence is arrayed in favour of the negative of this question. Magendie and Breschet, however, in one trial made on the 19th June 1813,

in the Hotel Dieu, succeeded in imparting the disease to one dog, by inoculation, who afterwards communicated the disorder to one of his species. The above is regarded as one of the best authenticated experiments on the subject; for in addition to the character and talents of the experimenters themselves, the facts were witnessed by numerous medical students. And notwithstanding the objections which have been urged against the account, the main points are admitted to be entitled to credit.

Now after the preceding statements it would be, but, fair to presume that the question relative to the poisonous character of the human saliva, is yet undetermined. The authority on neither side can be rejected or despised; and the facts furnished by one case are insufficient to destroy the opposing testimony of a thousand.

In this state of uncertainty, it will be prudent, at least, to use such precautionary measures as are usually resorted to for the prevention of the disease whenever through accident any-

attendant on the sick may have encountered the saliva; even though the assertion, be not credited that there is no well authenticated case on record communicated from one of the human species to another. It is common, in the writings of authors, to find allusion made to a form of Hydrophobia occurring as a symptom attendant on certain nervous and inflammatory complaints; and from the frequency of such mention we feel bound to advert to this subject, for the purpose of pointing out the difference between the genuine and spurious disorder, and establishing a correct diagnosis. From various authorities, we think the proposition can be clearly proved, that there is a symptomatic hydrophobia; and that it has appeared in the course of hysteria, epilepsy, various injuries of the brain, the operation of certain poisons, and the anginose affections. Why there should be a dread of fluids in the last named affections, is readily comprehended, and could as easily be explained; but in the others it is less intelligible. To refer it to some mental hallucination, or-

a general nervous impressibility is very vague; yet we can do no better. Indeed the cause of this singular symptom in genuine hydrophobia is equally obscure and hypothetical. The distinction between hysteria and rabies is easily made out. The history of the case, the suddenness of its occurrence, the sighing, sobbing character of the respiration, the state of the mind, the alternation and subsidence of the symptoms, the curableness of the one, and the fatality of the other, are all distinctive characteristics. The entire dissimularity of rabies from all other diseases, with the simple exception of this one accidental symptom which it seems is quite common in symptomatology, — makes it unnecessary to enumerate and particularize the diagnostic marks of these several diseases; but there is one yet to which it is so nearly allied in character that the contrast might as well be drawn. This disease is tetanus. Both are placed in the class of nervoses; both are characterized by spasm, and they are alike dangerous; but the spasm in the one case is tonic, in the other clonic. In one case the patient is dreadfully-

irritable, and apprehensive, and suspicious, and in some instances there is a degree of mania or delirium mixed up with the irritability; the sufferer is very garrulous and excited; in the other the mental faculties are clear, and the patient serene, and what is called heartwhole to the last.

In tetanus, again, there is no thirst, and seldom any accumulation of tough and stringy mucous in the fauces and about the angles of the mouth; in hydrophobia both these symptoms are almost always present. So also is vomiting; but vomiting in tetanus is rare. Again, in tetanus there is a rigid closure of the jaws, which of necessity precludes all motion; whereas in rabies, the jaw is not only movable, but constantly in motion, in consequence of the efforts made to clear the mouth of the viscid mucus with which it is obstructed.

Prognosis.— The uniform termination of hydrophobia when it has once advanced to the stage of complete development is death; and, perhaps, when the second stage has become established the case may be deemed hopeless. There is rarely, at least, a recovery.

Of a recent case, however, i.e. one yet in a state of incubation, and submitted to proper treatment, certain hope of recovery may be entertained.
The wound inflicted by a rabid animal is thought to be perilous in proportion to its extent. A small wound is conceived to be more alarming than a large one, from the fact that less blood will flow from the part, and consequently the poison will be more securely lodged therein. More danger is to be apprehended, too, from deep than superficial injuries; and from several than one. Much, also, depends upon the fact whether or not the bite was inflicted upon a part in a state of nudity or through the clothing. Numerous instances are on record of individuals who were bitten, by rabid animals, through their garments, that escaped infection; yet it would be imprudent and unsafe to base a favorable prognosis upon this circumstance alone, without extending to the patient the benefit of all those means of prevention, which experience recognises as effectual. Something relative to this matter may be learned by reference to statistics. Out of between twenty and thirty persons bitten by a

mad dog, says Dr. J. Vaughan, but one was attacked with rabies. Dr. J. Hunter tells of 21 persons having been bitten, and of that number, but one having fallen a victim to hydrophobia. Fifteen people were bitten at Senlis and taken care of, yet three were seized with the disorder. Seventeen others were bit by a wolf, and ten were attacked; and twenty three again by a she wolf, and thirteen died of rabies. Thus the average of mortality in these cases is a little over one-fourth. From the above accounts it cannot be unobserved, that the bites inflicted by rabid wolves are by far the more noxious. To what can this excessive virulence be owing? Is there any thing in the wild character of the animal, his habits, or mode of life, calculated to render him more susceptible to the influence of the hydrophobic virus, and of its reproduction in a much more deadly form? Or is the true explanation to be found in the fact, that the wolf generally fixes his fangs in some naked and exposed part. The latter is conceived to be the more plausible solution. The bite of a rabid animal may be regarded as much more dangerous if it happen-

in a part, that renders the complete excision of the portion containing the virus impossible. Thus bites near large arteries, the joints, in the hands &c. are of a more serious character than those in other parts. The vascularity of the wounded part, according to John Hunter, increases somewhat the hazard of the injury. According to Dr. Marct, as well as others' observation that the pain in the wound follows the course of the nerves, rather than that of the absorbents, the inference might be made that the poison acts as a peculiar nervous irritant, and that the risk attending its lodgment in the system would depend upon the sensibility of the part. Be this as it may, one thing is certain, that the prognosis may be regarded as more favorable, the earlier proper preventative measures are employed; and that when the disease has passed on to its third stage, we can predict with equal confidence a fatal termination. Post Mortem appearances. There is no malady, perhaps, so destructive of life that presents on examination so great a diversity of aspects, and that has given rise to such extensive speculation —

respecting its true seat and nature, as the one now under consideration. By Trollier the larynx, trachea, and bronchiae were examined, in six cases, and appeared to have marks of inflammation, - the traces of which were the most marked low down, where the mucous membrane was of the color of wine-lees. The lungs were of a deep red color in all the cases, and three of the six were emphysematous. In a fourth instance, the emphysema was confined to the cellular substances between the two layers of the mediastinum, and under the muscles of the neck. In two of these cases some gelatinous clots were found in the heart and large vessels; and in three a good deal of air escaped from the heart and aorta.

In all of the six cases inflammatory traces were found in the brain or its meninges. The sinuses were filled with a dark colored fluid; and the pia mater was much injected, and of a brownish hue. The same appearances were discovered upon the cerebellum, and the vessels on the investment of the medulla spinalis were considerably enlarged.

The surface of the cerebrum was also studded with scarlet spots; the plexus choroides was gorged with blood of a brown color; and in two of the cases the pia mater was thickened, and the cerebral substance was more than usually soft. In every one of these cases the salivary glands seemed to be perfectly healthy; the mouth and fauces pale, scarcely lubricated with mucus, and quite free from all frothy matter.

Inflammation of the mucous membrane of the stomach and small intestines has likewise been very generally noticed as may be seen by reference to the accounts published by Magendie, Powell, Oldknow, Ballingall, and Dupuytren, it is stated, found the mucous membrane of the stomach and bowels inflamed in several places and almost gangrenous; and Ribes detected the gall-bladder in a state of emptiness; the mucous coat of the stomach, jejunum, and ileum inflamed: and these organs much contracted.

Van Swieten and Mead assert that, sometimes, no morbid appearances whatever are to be found, either in the head, chest, throat, or abdominal organs.

Many, indeed, are the conjectures of pathologists in regard to the locality of this disease. Hufeland supposed that the Medulla Spinalis is originally affected and that the effects of the poison are then extended to the nerves of the trunk. Dr. Read maintained that an alteration of the Spinal marrow was essentially concerned in the disease; and others that the brain was the part principally affected. Dr. Watson places the seat of this disorder in that portion of the nervous system which comprises the excito-motory apparatus— the true Spinal Marrow— with its appendages of afferent and efferent nerves; and he goes still farther and says, that it is the upper portion of this apparatus whose functions are primarily deranged,— that the virus acts mainly upon the nervous arcs which pertain to the throat, and with which the eighth pair in particular is connected. That there is nothing singular in the local influence thus exerted by this specific virus, he exemplifies by the action of ergot on the nervous arcs belonging to the uterus, and Cantharides on those of the bladder. Yet after all these ingenious hypotheses, it may still be asked— where is the seat of hydrophobia? It would seem wrong to—

ascribe all its phenomena to inflammation of the alimentary canal, or respiratory apparatus, or to inflammation at all. Even in those cases presenting marks assumed to be inflammatory traces, there is no buffed blood, no high-colored urine, no abraded tongue, no full, strong, and excited pulse. By confining it to the upper portion of the excito-motory apparatus, we lose sight of the extreme general irritability, of the singular suspicion of mind, of the mental anguish and delirium. When so many contradictory lesions have been observed, and when no deviation from the normal standard could be detected, although in all, alike, the same dread symptoms were manifest, and, too, when every variety of treatment has failed to rescue, it may be said, a single case from destruction, we are compelled to remain in confusion and uncertainty. Toiling, science has been toiling for centuries, yet she has established no positive facts, save the cause of rabies, and the means of its prevention. For another age and generation is reserved the glory of demonstrating clearly the true functions of the nervous system, as well as the seat and nature of this intricate and fatal malady.

Treatment. Of treatment we have two kinds—the prophylactic and curative. The first is to be resorted to for the prevention of the disease, and the other for its permanent removal. Of all the remedies employed for the prevention of hydrophobia, the excision of the infected part is by far the most effectual and reliable one known at the present day. Caustics have been recommended, by Mr. Gonatt, to the exclusion of the knife; and from the results of his experience, we are almost inclined to adopt his treatment. Lunar Caustic, it is well known acts as an efficient preventative of Syphilis; and why should it not destroy another animal poison less active, though truly quite as terrible? Certainly the caustic application of Mr. Gonatt is entitled to great confidence, and with it, it seems to me, a case should be treated which involves the destruction of a limb. No reckless display of surgical ability should be made over any individual so unfortunate as to have recieved an injury from a rabid animal in such a part. To be sure it should be a matter of unending regret and perhaps of self-reproach, to that physician in—

whose hands a case as the above would end in death because he had been deprived of more efficient preventative measures in the substitution of caustic for the knife; but we regard the loss of a limb as a great calamity, and esteem that man justifiable, often all that Mr. Jonatt has accomplished with his remedy, in selecting it for the treatment of cases of the nature above mentioned.
When excision is practiced, the mode recommended by Abernethy, according to Watson, is as follows; — The cell into which a penetrating tooth has gone must be cut out. Let a skewer be shaped, as nearly as possible, in the form of the tooth, and then placed in the cavity formed by the tooth; and then lit the skewer and the whole cell containing it be removed by an elliptical incision. The removed cell should be examined to see if every portion with which the tooth might have come in contact has been taken away; the cell may even be filled with quicksilver to see if a globule escape. The efficient performance of the excision does not depend upon the extent, but upon the accuracy of the operation.

After the operation, it would be well to encourage hemorrhage from the part, by the application of cupping-glasses; and if any doubt remains as to the completeness of the operation, the wound should be cauterized with silver, or potassa or nitric acid.
After the employment of all these means even, we cannot be perfectly certain of the patients security; and if we bear in mind the rapidity with which the poison may traverse the entire system, through the medium of the circulation, we may readily perceive why these measures sometimes fail.
In connection with this subject much has been said about the after treatment of the wound made by the operation;- some contending for its immediate closure, and others for the treatment calculated to promote free and abundant suppuration. If the excision of the part be accomplished immediately after the insertion of the virus, and the operation has been thorough and complete, we can see no reason for keeping the wound open; but when any doubt exists as to the entire removal of the part holding the virus, or the patient for greater-

security desires it, suppuration should be induced. In the way of prophylaxis a host of other remedies have been employed, but with variable success. The administration of mercury to ptyalism was once deemed certain of success. The opening of pustules under the tongue, and profuse draughts of the decoction of broom tops, had also its day. The pulvis antilyssus, the Amskirk medicine, the Stonguin medicine, and the Tanjore pills have all enjoyed an undeserved reputation. Box-wood, alisma plantago, and belladona have been much esteemed; and of all of them we have the opinion of Mr. Jonatt, who experimented with them to a considerable extent. The box he thinks has some effect; the alisma more. The belladonna and scutellaria which I omitted to mention, combined he regards as valuable, and declares them a medicine which though not a specific, should, nevertheless, in certain cases, be used. Cold and warm bathing, vinegar, cantharides, tartar emetic, chlorine, nux vomica, stramonium, tobacco, camphor, and in fact almost every article in Materia Medica, have been at one time or other employed as preventatives against rabies.

Curative treatment? When once the disease is fully established, and the specific symptoms of hydrophobia have commenced we can entertain little hope either of saving or benefiting our patient by medicine,- the disease having in almost every instance baffled every plan of treatment, which the united talents of those engaged in the healing art have suggested during the existence of medicine as a science.
All the most powerful remedial agents, of every class have been tried repeatedly, but with little or no success. Mercury, opium, camphor, musk, cantharides, arsenic, nitrate of silver, belladonna, ammonia, bleeding &c,- have all been used; yet all writers on the subject lead us to the conclusion that we cannot cure the distemper.
As it was in former times, so it is still Iatros iatai Oavatos. The physician that cures is death.
There is no well authenticated case on record, in which a cure was accomplished by any single drug, or any regular plan of treatment. It cannot be arrested, but like small pox, it runs its course.
There are a few cases of spontaneous recovery related-

in the writings of various authors; but whether such were genuine and unequivocal cases of rabies is uncertain. Venesection, one of our chief remedies in certain disorders, has been employed repeatedly in the treatment of this complaint, and to a prodigious extent; and, it seems too, with benefit; but if we recollect that the effect of bleeding is to lower the vital energies, and that the vital actions are already labouring under exhaustion, from the influence of the hydrophobic virus, we may readily perceive that bleeding, added to the already moribund condition of the patient, would only tend to hasten the fatal termination. Magendie recommended, that after bleeding, large quantities of warm water should be injected into the veins; and it seems that this process was attended with some benefit; but its good effects last but for a short time, and a repetition of the process usually proves wholely ineffectual. As regards opium in the treatment of this disease, experience has long since proved that it has little control over this disorder. It has been given in all its various forms and combinations

and although it is the summum remedium in most of our nervous complaints, its action upon this disease is but transitory. Notwithstanding it has been given in enormous doses it tends merely to mitigate the symptoms for a short time; for they soon return with increased violence, and a renewal of the dose proves utterly powerless. As to the whole list of articles that have been employed in the treatment of this disorder experience clearly proves them destitute of any curative power over this disorder. At one time it was thought that mercury given so as to produce profuse ptyalism would produce a cure; but we have seen the action of this agent in another part of our discourse.
Since then we cannot cure this disorder, it is our duty, we conceive, so far as we are able, to mitigate the sufferings of our patient. This should be the chief object of our treatment. We should give opium in all its various forms, combined with other sedatives. We should support the strength with such aliment as he may be able to take; and if there is any remedy affording the least chance of success it is our duty to employ it; But the barbarous custom of experimen

ting upon patients, tortured and harassed with sufferings of an indescribable character, should for ever be abandoned by every philanthropic and scientific physician. It is to be hoped that the day is not far distant when the anticipated experiment, by means of the Woorali, a most virulent poison, so as to produce asphyxia and then restore the patient gradually to consciousness by artificial respiration, shall effect a cure for this disease.

Before terminating our subject there is one point connected with the treatment of this disease deserving a short notice. All writers on hydrophobia seem to have lost sight of what we believe to be the proper plan of treatment; e. i. of obviating the tendency to death; the stimulant treatment. Cullen laid down the precept, always to obviate the tendency to death; and this seems to be the object of the physician in the treatment of every grave disease. Now in tetanus death takes place by asthenia, and we are directed to support the strength, by stimulants, tonics and proper nutriment. In hydrophobia death takes place by the same process, and reasoning from analogy the same treatment is necessary; But time and observation are necessary to establish or refute this theory.

An Inaugural Dissertation

on

The Differential Diagnosis

between

Typhoid and Typhus Fevers

submitted to the examination

of the

Provost, Regents, and Faculty of Physic

of the

University of Maryland

for the degree of M.D

by

John C. Bamlbyck

To

Nathan R. Smith. M.D

Professor of Surgery in the
Maryland University

Permit me to dedicate the following
dissertation to you, as a mark of my respect
for your professional talents, and a small
tribute of Gratitude for the many facilities,
that you have afforded me, while in the pursuit
of my Medical education

Yours truly
The Author

It is indeed extraordinary, how slow the human mind is to recieve new impressions even of the truth, wedded as it usually is to first impressions —

In the following pages I shall speak of the accesses of Typhus, and Typhoid fevers; of their symptomatology and pathology; and the treatment of Typhus fever.

A great degree of similarity obtains between the accesses of Typhus and Typhoid fevers. Some epidemics of Typhoid fever have been observed, in which the accesses was much more sudden, than in others. This rule is equally applicable to Typhus fever. The best authorities differ widely on this subject, some citing numerous cases where the accesses was rapid, others where it was ill defined. This being the case very little room is left for idle speculation.

Dr Jackson observes, that he found more difficulty in ascertaining the commencement of Typhoid fever, than any other acute disease; Whereas Chomel says, that of one hundred & twelve cases noted by him, the accesses was rapid in seventy three. Many cases are recorded in which the accesses, of typhus, was very rapid, and to have been instantaneously manifested. Dr Gerhard says, that the initial symptoms, of these two fevers, differ in the greater degree of stupor and prostration in typhus, which strongly contrast with the moderate Cephalalgia and disturbance of the senses in typhoid. The accesses of typhus fever, which

was witnessed, in over one hundred cases at the Baltimore Infirmary, was gradual.

Symptomatology. It is sometimes difficult, for the Physician to say certainly, at the onset of either of these fevers, whether the case will prove one of typhus, or typhoid fever, a day or two will generally suffice, to enable him, to decide with a good deal of precision. They both commence with cephalalgia, tinnitus aurium and vertigo. There is nevertheless a well marked and almost invariable symptom attendant upon typhus, by which we can frequently make up our minds, which of the two diseases we have before us. That symptom is the suffusion of the eyes; which makes its appearance early in the fever. The Physiognomy, of the patient, will aid no more or less in our diagnosis. In seeing two patients labouring under these fevers side by side, the difference of expression is very obvious, and cannot fail to impress even a casual observer. I am not however able to decide, what that difference is. It should be seen to be appreciated

Although stupor exists in both fevers, and is modified by the severity of the attack; yet as a general rule the stupor in typhus is the most marked. It is admitted by all, who have written on these diseases

that delirium accompanies each, if the fever runs at all high. But it differs somewhat in regard to character In typhoid the delirium is more active, the patients wander about the hospital, talk wildly of some imaginary object, or think that they are engaged in some very important business. That of typhus is low & muttering, ~~it is~~ it is difficult to arouse the patient, or to engage his attention for any length of time, as he soon relapses into his former condition

Subsultus is no less characteristic of the one, than of the other, and when it is extreme, is rather a bad omen, more so however in typhus than in typhoid Its most frequent seat is the wrist and hand, although other parts of the body are not exempt from it. The muscles of the face being much affected, when perhaps it is not observed elsewhere. Carphologia is also another symptom of these two fevers, it is much oftener met with in typhoid, & is considered unfavorable in either; being rarely seen until near the end of fatal cases. We find that in typhus, the skin is frequently very sensitive, & when pressure is made over the abdomen, one would be disposed to attribute the pain, of which the patients

loudly complain, to some serious visceral affection. I do not mean to say, that in typhus fever the abdominal viscera are in a normal condition, but if pressure is made on other parts of the body, the patient feels it almost as sensibly, as when made over the abdomen

In a few days this sensibility of the skin is frequently followed by muscular soreness The thoracic symptoms, which we find in both vary but slightly, Pneumonia and Bronchitis are the most common, The Pneumonia generally occupies the posterior lobes of the lungs, it may occupy an entire lung or maybe both, but this is rare. The latter symptom is one of the diagnostic signs of typhoid and although present in typhus, is by no means so common or severe.

Abdominal symptoms. The condition of the tongue varies according to the severity and duration of the fever at the inception of either, the tongue is moist and covered with a thin whitish fur; but as the diseases progress the tip & edges become reddened, the centre being covered with a dirty white coat, which gradually becomes darker and dryer & finally of a brown color & fissured.

This is more frequently the case in typhoid fever, as far as my observation goes. In a majority of the Typhus cases that I witnessed at the Alms House Hospital, the tongue was generally more or less moist & of a yellowish white color in the centre, but in both of these fevers, it is protruded with difficulty, this is easily accounted for, by the impaired condition of the nervous system. The teeth are covered with sordes and the lips chapped in both of these diseases, but not so much so in typhus as in typhoid fever

One of the first & most constant symptoms of these two fevers is the complete anorexia. In the limited number of cases, that have fallen under my observation, I am sure that in every one the patient complained of the loss of appetite; in many cases the mere mention of eating was loathsome. The return of the appetite is always hailed by Physician & patient as a harbinger of convalescence. Another symptom, no less common, is the great thirst which harrasses the patient continually, and is, I think, more ~~more~~ urgent in Typhus, owing to the Gastritis, of which I shall speak in another place. Nausea and vomiting are noticed

by all who have written on these fevers, & certainly attended the cases at the Alms House.

I have already stated, that pressure made over the abdomen gave pain, and attempted to account for this, by the increased sensibility of the skin & muscular soreness in typhus. This is undoubtedly the case to a certain extent, but there is something deeper seated, which will more satisfactorily explain the cause of suffering; more or less Gastritis always exists, at least it was present in all the cases noticed at the Alms House Hospital, amounting to thirty two, & so far as I have been able to ascertain was observed in every case at the Infirmary.

Dr. J. H. Buckler says, that it is, as constant a symptom in typhus, as tenderness over the right iliac is in typhoid. It has been remarked that the pain experienced in the abdomen, when pressure is made, is greatest in typhoid when the bowels are loose; in typhus it is the opposite. This I have not observed in the cases, that have fallen under my observation. There is a very essential difference in the state of the bowels in these two affections. In typhoid fever diarrhoea is one of the most frequent symptoms, and

is met with both in mild & severe cases. This is easily accounted for, when we examine the intestines of a person, who has died of typhoid fever or dothinenteritis Spontaneous diarrhoea is rarely met with in typhus fever on the contrary, in a majority of the cases, mild laxatives in the commencement of the disease are beneficial, but the practitioner should be guarded in the administration of purgatives, I saw two cases at the Alms House, in both of which quite a severe diarrhoea was produced by the administration of a dose of the solution of Soda & Potash, which was only given as a febrifuge. In these cases some difficulty was experienced in checking the profuse discharge.

Meteorism and gurgling are some of the other characteristic symptoms of these two fevers, but they are not symptoms of very great importance, although their presence in typhoid, taken in connexion with other symptoms, would enable us, to establish a correct diagnosis with more certainty There appears to be some diversity of opinion concerning the existence of these symptoms in the one or other form of these fevers. Dr Bartlett remarks that he found in

almost every case of these fevers, meteorism & gurgling, while of several hundred cases observed by Dr Stewart these symptoms were present in only seventy four The cases at the Alms House bear out the statement made by Dr Bartlett, meteorism and gurgling attending the fevers at some time or other of their course

Individuals who have typhoid fever commence gradually to become emaciated in a short time after the inception of the disease, this may in a great measure be attributed to the constant diarrhoea, which I have remarked exists in dothienteritis, This symptom is rarely absent & of course increases in proportion to the duration and severity of the attack. We do not in the generality of cases find the emaciation in typhus fever, until the disease has lasted for two or even three weeks & then it is never so great, as in typhoid fever. This statement is corroborated I think by Dr Gerhard.

There are many miscellaneous symptoms, some of which are incident to the one some to the other form of fever; for instance Epistaxis is one of the most usual premonitory symptoms of typhoid

and is caused by the decrease of fibrin & the impoverished condition of the blood. I am unable to assign any reason why it should not be as common in typhus, granting that it is caused by the circumstance, which I have attributed epistaxis to. Dr. Gerhard confirms my opinion, which is that it is not often noticed in ship fever.

Both of these fevers are characterized by an eruption & notwithstanding they resemble each other in many points are essentially different, and can easily be distinguished the one from the other. They not only vary in color but the period at which they make their appearance in the two fevers is not the same.

The nature and character of the eruption of typhoid fever has been so accurately described by Drs. Bartlett & M. Louis, that there will be little use in my attempting to describe it, except to contrast it with that of typhus or spotted fever. The eruption of typhoid fever presents small lenticular points, of a rose or bright pink color, easily disappearing under pressure or when the blood is in any manner driven from the capillaries of the parts adjacent, and immediately reappearing when the capillary

circulation is allowed to go on freely in the part. They vary very much in size, some not being larger than the head of a pin, others may be as large as a split pea or even a sixpence. As a general rule they may be seen at any time after or during the second week, until the period of convalescence. In a very extraordinary case at the Alms House I found them on the eightieth day & they could in no way be distinguished from the first crop which I saw. The favorite seats (if I may be allowed the expression) of these rose spots are the neck, chest, abdomen, & back, rarely occurring upon the extremities or face. I have seen upwards of fifty cases, & in no one case have I ever seen them on the face, yet there are cases recorded, in which, but few parts of the body were exempt from them

The petechiae of ship fever may come out, after the third day, in some cases, but does not appear much before the sixth or seventh. They resemble the rose spots when first observed, very much in color, but they do not so readily disappear under pressure & if as is sometimes the case, their reappearance is not near so rapid. After a few days they become

much darker and pressure has no effect whatever on them, as the fever declines they become of a brownish color, & ultimately can with difficulty be distinguished from freckles. Again unlike the rose spots of typhoid fever, these spots are not confined to certain parts of the body, but they are met with everywhere, no part of the body or limbs is exempt from them. Dr Berryman, who carefully watched all of the cases at the Infirmary, informed me that he found them on the instep where they were very sparse on any other part of the body. I have observed this fact in six of the eight cases, which I have seen since he communicated the circumstance to me.

The size of the spots differs on different parts of the body, being the largest where gravity most impedes the return circulation, their size like the rose-spots, varies very much. Purpura is also a frequent complication of typhus, at least so far as my limited observation goes, this contrary to the opinion entertained by Dr Stewart, who only met with it three times in one hundred and thirty nine cases. Huxham, who wrote an admirable treatise on Putrid malignant or petechial fever, a century ago,

confirms my opinion of the frequency of this complication
We find in typhus fever sudamina, but they are no less
characteristic of it, than of typoid, or any other fever in
which the patients perspire freely; they may even be seen
when there is no fever at all, during the summer; and
are caused by the fluid not being able to escape through
the scarf skin. When Parotitis supervenes either upon
typhus or typhoid, it augurs badly. I have only witnessed
it four times, two of the patients having typhoid fever
the other two typhus. Three of these cases proved fatal;
one of which resulted in a very severe meningitis, which
destroyed the life of the patient in less than twelve hours.
Mr Shaw in speaking of the slow nervous fever, which
from his description, is identical I think with typhoid
fever of the present day, says that where deafness ends
in an Empostume of the ear, it is generally a good symp-
tom; and so it is, also when a Parotitis suppurates
The only one of the four cases which I have mentioned
that convalesced was that of an Irish girl who
had inflammation & profuse suppuration of the
Parotid

I believe it is at present an established fact, that typhoid fever never attacks the same individual a second time; this is not always the case in typhus, but it seldom happens Neither does an attack of typhoid fever prevent one from contracting ship fever, to prove this, I will cite a case, that came under my own observation.

Last February, a German aged about twenty entered the Alms House Hospital; the case proved to be typhoid fever, which lasted one hundred and four days, about three weeks prior to his leaving the Hospital, several persons were admitted who had typhus fever. In less than a month after leaving the Hospital, he was brought in from the yard with the premonitory symptoms of Ship fever, which in a few days declared itself beyond all question, it was the opinion of all who saw it that it was as well marked a case as had ever been in the house. I think that this case is sufficient to overthrow the doctrine, that they are essentially the same. Granting that an individual could have a second attack of typhoid fever, I hold it impossible for the two attacks to follow each other in such rapid succession

It is well known, that a person can have Small pox or measles a second time, but there is no case recorded where the attacks followed in such rapid succession as one month, more especially if it had been a grave form of either. Typhus fever may be produced by various circumstances, amongst others a deficiency of healthy food and contact, by which the disease rapidly spreads. This last has by many been denied, but we have the best and most positive evidence of the truth of this assertion I shall not attempt to discuss this point here, as it would extend my dissertation to an unnecessary length, but will refer those, who differ with me on this subject to the standard works of the day, or to the books of any Hospital into which patients, having Ship fever, are admitted.

Pathology or morbid Physiology is of itself sufficient to prove the non identity of these two fevers, clearly to any one who is open to conviction. We find the bodies of those persons, who die of either of these fevers more or less emaciated, in proportion to the duration and the severity of the disease, the limbs frequently very rigid a short time after death. If the patient died of typhus we may find the face & head suffused, the breast presenting

a marbled or variegated appearance. I have never seen the rose spots of typhoid fever after death. No change occurs, however, in the petechial eruption of typhus for several hours after death. When the Calvarium is removed from an individual who has died of typhus fever we find the membranes injected, & when we cut through them, a serous fluid exudes, not generally exceeding an ounce. The Brain presents nearly the same appearance in both of these diseases, with perhaps this exception, that there is more of the punctiform injection throughout the substance of the brain in typhus fever.—

The lungs in both these diseases present various appearances in different cases. They may or may not be healthy, but generally we find some alterations, the most frequent & striking are Pneumonia and Bronchitis. I am not prepared to say whether or not these complications are more frequent or severe in typhoid or typhus. I saw one case in which Phthisis was one of the complications, as a general rule it not so much a complication as a sequelae of the two diseases. The Stomach presents alterations more characteristic of

of the two diseases under consideration, have any organ, which I have as yet mentioned. A vast majority of the stomachs of Persons, who have died of typhoid fever, affords us conclusive evidence that this organ plays an important part in the numerous complications observable in this disease.

The mucous membrane is found more or less altered in nearly every instance, The alteration consists in a change of the color & thickness, or, in ulceration of this membrane. The most frequent change in color, is produced by the capillary injection, but is not an effect of inflammation, in the plurality of cases. Ulceration is rarely met with, I should judge, as it was only noticed by Louis in a few instances. We have all of the above mentioned symptoms in typhus fever, & we have some more, The injection of the stomach is that of inflammation, this satisfactorily accounts for the Gastritis, which we find during the life of the patient. I discovered in nearly every autopsy that was made at the Alms House contraction of the centre of the stomach, with a peculiar puckering. the contraction is often very considerable

so much so as to diminish the size of the organ nearly one half. In one autopsy that was made, there was found near the Pyloric extremity a large ulceration about the size of a shilling, with very red & ragged edges I think it is rarely the case that we find ulceration of the stomach, Dr Bartlett does not speak of it in his first work, on typhoid & typhus fevers, although he may in his late book.

The most important pathological lesion of typhoid fever is found in the small intestine & consists in ulceration of Peyers patches, and the isolated follicles. Peyers patches present a different appearance very often, as you proceed towards the Ileo coecal valve. Those found in the upper part of the tube may be nearly normal in their condition, as you go lower down, you will find them in that state which has been denominated the shaved beard look, the edges of others may be somewhat elevated and ragged, with more or less of injection of the surrounding portion of the intestinal tube. Others again may have a point of ulceration not larger than a small shot. these points of ulceration may in

some of the patches be so numerous as to destroy the entire land. It is not unusual to find some of the glands perfectly cicatrized in one part of the bowel whilst they are observed in another part to be in the highest state of ulceration.

This alteration of the patches & follicles which is usually found in typhoid fever, is never or rarely seen in the autopsies of typhus. We may have slight injection of the mucous membrane of the small intestine, but as a general rule it is perfectly healthy. Some Colitis was found to have existed in nearly every autopsy of typhus that was made at the Alms House, The mucous membrane was thickened, softened & very much injected, and sometimes ulceration of the follicles was observed.

The spleen is more or less altered in both of these diseases. In typhoid fever it is generally very much enlarged & changed in color, usually darker than natural and approximating a dark blue. The parenchyma of the organ is reduced to a complete pulp & is not much more consistent than the crassamentum of healthy blood. Every one of these changes I have observed in the spleens of typhus fever patients

Enlargement of the mesenteric glands which is one of the marked lesions of typhoid does not exist in typhus fever; this fact is noticed by Dr. Bartlett and his statement has been sustained in all our autopsies at the Alms House

There is no established mode of treatment agreed upon, or sanctioned, by the majority of writers on typhus fever; every one has his favorite mode & thinks of course that his is the only proper one. Bloodletting is considered by many as the most important part of the treatment, Dr. Bartlett mentions several very intelligent Physicians who were said to be free bleeders, he further remarks that extreme caution should be observed in bleeding typhus fever patients. The cases that were treated at the Alms House were not bled, as they were brought in for the most part at too advanced a period of the disease

Drs. Little & Matteer, I should think had taken the just view of the subject, They consider typhus fever essentially a disease of debility, & discard general bloodletting altogether. Local blood letting is not injurious, but on the contrary very beneficial when there is much gastric irritation, or congestion of the head, face and eyes.

The frequent administration of purgatives is sometimes dangerous on account of the tendency to diarrhoea, which is very difficult to check when once fairly set up. In the commencement of the fever a gentle cathartic or an enema is beneficial in clearing out the intestinal canal & in removing the constipation usually attendant upon this fever. A small dose of Castor oil or Rochelle salt is as good if not better than any other cathartic that you can give. The treatment of typhus which was pursued at the Alms House was according to my judgement very rational & successful.

In the first instance a solution of Bi carb sodae, and chlor potass, was administered, if this brought on diarrhoea a few drops of Black drop were given to check it & also to act as a soporific, or in that case Spiritus mindereri was substituted for the solution of Bi carb sodae & Chl Potass. As the fever progressed & the strength began to fail, stimulants & tonics were given. Port wine was found to answer better than any other stimulus when taken in conjunction with Carbammon gss three times a day. He was hard disapproves of giving Carb ammoniae, as he says that if it is mixed with

blood fresh drawn, destroys the globules in less than a minute, & when taken internally will produce Haemorrages. These effects I have never witnessed, If as was sometimes the case the pulse became extremely weak & the strength failing instead of reviving under the above treatment Brandy to the amount of ℥j daily was added to the Port wine & Carb ammon,

The quantity of stimulus which can be taken without affecting the head of those laboring under typhus fever is almost incredible, I saw a case of typhoid fever recover in which the patient for nearly three weeks took nothing except, Port wine & Blandy a a ℥j, Porter ℥j Carb ammon & Sulph Quinia a a gr xv, daily. The fact that such a quantity of stimulus failed to intoxicate the man showed to how great an extent his vital energies were depressed. I believe the life of this patient was saved by the stimulants & that the smallest dose of Antimony would have proved fatal. In fact if the quantity of stimulus had been diminished the patient perhaps would have sunk Typhus fever is as much a disease of debility, as typhoid consequently requires a like stimulant & tonic

course of treatment, in connexion with a small quantity of Strychnia either taken internally or used endermically. Blisters have also been advantageously used to arouse the nervous energy.

In severe cases where the capillary circulation became very much deranged, the body of the patient was washed once or twice a day with whiskey & salt, which gave a healthy tone to the capillaries. Ice was also applied to the head which relieved the intense heat & constringed the vessels, thereby lessening in the congestion. – –

An

Inaugural Dissertation

on

Hydrargyrus and its Proto Chloride

Submitted to the Examination

of the

Provost, Regents, and Faculty of Physic,

of the University of Maryland

for the degree of

Doctor of Medecine

by

Reuben H Slingluff

Hydrargyrus and its Proto Chloride

The magnitude and importance of the subject I have selected for a thesis is well calculated to overwhelm a tyro, with doubts as to his ability to sustain himself in such a dissertation as the importance of the subject demands. I feel confident however, that a mere relation of facts connected with the subject (familiar as they may be to your well stored minds) will not be foreign to my duty; and will be all that can be expected from a noviciate in Medical Science. And if nothing else be accomplished than the impressing of facts, concerning this, the most potent of remedial agents upon my mind, I shall have the satisfaction of knowing, that my labors have not been barren of improvement. With these reflections premised, I shall proceed to the discussion of my subject, with as much ability as my humble capacity will allow, feeling confident that, that indulgence which always springs from superior knowledge and

experience, will be extended to whatever defects, may be found in this my first medical dissertation.

The first remarkable feature in the history of this remedy, that arrests our attention in this investigation, is the popular objection to the administration of mercury. No remedy in all the catalogue of our Materia Medica, has recieved so many maledictions, or is held in such dread and detestation by the people, as this one; and yet by the Proffession, no medcine is more extensively used, or more confidently relied upon. It is, and has been (since the time its mighty powers were first properly understood) assigned, the first place among the agents employed in combatting disease; and has been most empskatically termed, "the great war horse" "the mightiest of the Sampsons" and it has numbered amongst its most extravagant admirers, and defenders, the best talent that has ever illuminated the annals of Medecine. As there must exist some

reason for this stubborn, and unnatural opposition, on the part of the mass, to what is considered by the wisest and best men their greatest benefactor; we shall endeavor to collect them, and give them the consideration they deserve.

Where the humane efforts of the educated Physician are arrested by this opposition, it is often the result of a prejudice created by mercenaries, and fostered by ignorance. Which prejudice is kept in constant agitation, by an inexplicable fondness possessed by the world, and by the American people in an eminent degree to be humbugged, which fondness or rather mania, flourishes and gains greater mastery over them, notwithstanding, the deceptions daily imposed upon them, the exposure of those by whom they were duped, or the simplicity and conclusiveness of the arguments with which the medical proffession endevors to undeceive them, and the injuries they sustain at the hands of these mercylers beings: who are insensi-

ble to all but thire own pecuniary gains. It is indeed astounding to observe the influence that an illiterate "Yarb Doctor", as they not unfrequently style themselves, with the mysterious air with which he speaks of the Indian origin, and wonderful efficacy of his nostrum; or the, Homeopathic who makes an assault directly upon the common sense of his dupe; or the Hydropathist who promises cure, upon condition that the patient outrages his own nature and becomes an amphibious creature. I say it is astounding and not at all flattering to Human Nature, to see the influence these charlatans gain and maintain over individuals, many of whom elicit respect and admiration, for their talents displayed in other departments of learning. And by the same artfulness that gives their own glaring impositions the ascendancy, do they destroy the confidence of persons in a remedy whose scientific origen, and great utility; has heretofor

commanded their unlimited reliance. In this work by a system of prevarication and falsehood, the more culpable because of its being clandestine as regards the Profession, they convert facts concerning the effects of this medecine, of which all well informed members of the Profession are aware, and generally able to prevent or subdue, into potent enjines for their purposed. Some of these facts I shall relate, when the manner in which they are employed, by persons so devoid of principle will be at once obvious. It often occurs that patients taking this drug, though previously notified by their intelligent and prudent Medical advisor, through accident or wilfulness are subjected to exposures, which renders the agent deleterious; an no one but those, actuated by the most malicious motives, or sunk in the most abject ignorance. would ascribe the faults of a patient, to an invaluable medecine; or it may hap

pen, and judging from the amount of assurance in the world often does occur, that persons not qualified to manage it, have the presumption to employ it; in such cases it would be as reasonable to blame a broadaxe in the hands of a child, for the mischief it may do, as to censure an inanimate drug, instead of its incapable and there for dangerous employer. But unfortunatly there are cases which occur to the most experienced, and which are beyond the power of Human Wisdom to anticipate. In which owing to a peculiarity of constitution termed idiosynerasy, this useful medecine is transformed into a dangerous poison, happily however for humanity, and the reputation of this great medecine, these cases are rare, and danger is often prevented by the judicious enquires of the Physician, These are some of the facts, upon which these harpies dwell in abusing the public mind, one instance will answer their purpose as well

as an hundred, for what may be deficient in regard to facts, they readily supply from their ample stock of falshood, innuendoes, and insinuations. And the assertions of these bold impostors, often prevail among the too credulous mass, in preference to the united and concentrated opinions, of a great and learned profession, whose knowledge is the best, that mortal man can draw from the secrets of Nature; and whose grand motive is the benefit of their fellow men. The one repudiates the employment of it, not that he is sincere in the opinion he advocates, for it has been questioned and with much reason whether he is able to draw a just conclusion upon a matter of that kind) but, from the most mercenary motives. The other sagely and humanely concludes, that its is better, that one should die from the use of it; than a thousand for want of it, Thus its supremacy over all articles, used in the Healing art, is amply sustained by all that

are worthy of regard, and whenever it has fallen into disrepute, it has not been owing to its own demerits, but the result of errors committed by those who used, or passed judgment upon it.

Mercury we are told, has been known from all antiquity, but regarded by the ancients, as a most deadly poison, and was not by them employed medicinally. It was first employed in Europe about the twelfth century, as an external agent in cutaneous disorders; but not as an internal remedy untill the sixteenth century, when John de Vigo became the pioneer, in this wide field of medical experiment, since which period it has gradually extended itself, its powers becoming better known untill the present time, and now, it deservedly occupies the first rank among remedies; and approaches as near to the character of a universal remedy, as we may ever hope to attain, as by management it may be made applicable

Mercury or Quick Silver, a name by which it is known on account of its fluidity at ordinary temperatures,- is a metal of the color and lustre of silver,- it solidifies at 39° and boils at 600° Farenheit,- is not oxidizable when exposed to the atmosphere, unless adulterated,- is dissolved by nitric acid, forming a nitrate of mercury,- when boiled with sulphuric acid unites with a portion of the oxigen of the acid, which oxide uniting with the remaining acid, forms a sulphate,- these are the only acids that act upon it, its specific gravity is 14.4,- its Chemical Equivalent 202,- It possesses no medical properties in the form of a metal, but has been occassionally resorted to, as a mechanical agent, in effecting a passage through the alimentary canal, but is seldom or never now used. It forms numerous and valuable compounds, many of which, are used in medecine, but the limits of a thesis, will not per-

carbonates, by soaps, and sulphydric acid.
The Physiological action of Calomel, is supposed to be that of a universal stimulant; what the peculiarity of the excitement may be, has never been determined; but the knowledge of its effects acquired by observation, fully convince us, of its superiority as regards permanency, and universality, over any other medecine now in use. It appears, so far as we are yet able to determine, to affect the human system in three ways, first, by absorption it is carried into the circulation, and acts through the medium of the blood, it is in this way that it produces its specific effect, which is decidedly the most important, and remarkable phenomenon, produced by this drug, and which will be again refered to in the course of this article. That it does act through the medium of the blood, is clearly and most satisfactorily proven, by its having been discovered in the fluids and solids

of the body; its presence in the cutaneous secretion, is beautifully exhibited, by the appearance of an amalgam upon the surface of gold, worn near the person of an individual, undergoing a mercurial course; the mercurial fœtor of the breath, evidences its presence in that exhalation; the metallic taste of the tongue, and its presence in the bones of persons, clearly demonstrates its presence, in the minute ramifications of the blood vessels. Its second mode of opperation is by sympathy, by which, impressions made upon one part of mucous membrane, are propogated to other parts, through the medium of the nerves; constituting, what has been termed continuous sympathy, in this way it produces its action upon the liver, kidneys, lungs, and skin. The third mode of action is local entirely, as is manifested by the purging, and vomiting, which often follows its administration, and in some exter. applications into which it enters.

In its extensive application to the cure of diseases, it has been employed in various capacities, as a Sialagogue, a cathartic, a cholagogue, a diuretic, a sudorific, an emmenagogue, an astringent, a stimulant, an antispasmodic, and as an anthelmintic, hence, we can appreciate its wide range of usefulness.

It may produce its remedial effect, by creating a new and peculiar condition, which supersedes the diseased condition, upon the principle, suggested by the immortal Hunter, that two morbid actions, can not exist in the body at the same time, unless in totally different structures. By this process of action, we often see disease yielding to it, though no sensible evacuations are the result of its administration.

It is also powerfully remedial by equalizing the circulation, and thus removing local congestion, which renders it particularly appropriate in congestive diseases.

Also by establishing an afflux to the inflamed glands, from the surrounding parts, and by exciting discharges from the intestines, and various excretory ducts of the body. By some one of these processes, or by a combination of them, it is made applicable in some stage of the treatment, to many of the ills that flesh is heir too.

But the most interesting Phenomenon, exhibited during the administration of this medicine, is its Specific effect, or Salivation, or Ptyalism, terms employed to designate, the constitutional effects of this agent,— Which subject, it is necessary for us thoroughly to understand, and appreciate, in the use of this substance, if we desire to retain our own, and the reputation of our medecine, In administering this agent to an individual, with whose predispositions and idiosyncrasies we are unacquainted, it is our duty to make enquires, as to wether it be the first time

it has been employed, and if such is not the case, to discover what were its general effects; or if it be the first time, to proceed with caution, as it acts with different degrees of violence, in different individuals. Why this difference exists we can only conjecture, and how to anticipate it is yet to be revealed, and for the present we must be content, with Prudence in its employment. For experience has taught us, that there are persons in whom the smallest doses, will produce the most appalling effect, causing great distress and danger; leaving the constitution permanently impaired, or the subject of obstinate, and incurable disease. Happily however these cases are rare, much more so than in times past, when the powers of the remedy were less understood, and by care might be almost entirely banished, from the records of the Proffession. Whilst in some there exists an inordinate

organs concerned in the circulation, and the various excretions, it extends its influence through the medium of the blood to the nervous system, increasing its irritability, and thereby reacting upon the heart and arteries, and thus perpetuating the train of constitutional morbid associations, which constitute mercurial fever.

The symtoms of moderate Ptyalism, are an increased action of the heart and arteries, the pulse becoming quick, tense, and sometimes full, the gums become tender, accompanied by a peculiar mettalic taste, of the mouth, and foetor of breath, this degree of Ptyalism, which is expressed in common medical parlance, "touching the gums" is considered by the best authorities, to be all that is necessary, to ensure all the salutary effects of the most profuse salivation, and is certainly preferable, as regards the safety and comfort of the patient; If however the administration of this mineral

be continued, through hardihood, or accident, a train of more serious symtoms ensue, the tongue, gums, and salivary glands swell, the teeth become painfull and loose, the salivary secretion is augmented, and ulceration commences on the tongue, gums, and roof of the mouth, the appetite fails, and pains are felt, in the stomach, and bowels, the countenance assumes and expression, indicative of great morbid irritability; and debility, and emaciation, rapidly supervene. And if the patient be the unfortunate possessor of the idiosyncrasy, the symtoms become still more alarming, and Epilepsy, Palsey, and even death may ensue. In counteracting these effects, many remedies are recommended, and are often beneficial, these general characters are those belonging to the anti phlogistic regimen, and evacuants, and are used in the early, and inflammatory stages; but stimulants both general

be continued, through hardihood, or accident, a train of more serious symtoms ensue, the tongue, gums, and salivary glands swell, the teeth become painfull and loose, the salivary secretion is augmented, and ulceration commences on the tongue, gums, and roof of the mouth, the appetite fails, and pains are felt, in the stomach, and bowels, the countenance assumes and expression, indicative of great morbid irritability; and debility, and emaciation, rapidly supervend. And if the patient be the unfortunate possessor of the idiosyncrasy, the symtoms become still more alarming, and Epilepsy, Palsey, and even death may ensue. In counteracting these effects, many remedies are recommended, and are often beneficial, these general characters are those belonging to the anti phlogistic regimen, and evacuants, and are used in the early, and inflammatory stages; but stimulants both general

ly and locally become necessary.- -
There are other peculiarities in the action of this medicine which deserves notice, It often produces nausea, vomiting, and gripping, the emesis consisting of billious matter, which often leads the inexperienced to imagine, that there exists an excess of that secretion in the system, but it is nothing more than the result of the direct action, of the medicine upon the liver.
The green color of the stools, which the continued administration of Mercury produces, is attributed by some to an alteration in the glandular, and follicular secretions, a question as yet sub judice, the merits of which, I have not room, if I had the inclination to examine.
The singular insusceptibility of children to the action of Calomel, is a matter of much practical importance, they requiring doses nearly as large as adults, a peec-

liarity that is explained, by the supposition that their alimentary canals, present no greater obstacles to its action than do those of adults It should be remembered that when salivation does occur in children, owing to the great irritability of their nervous systems, the consequences are apt to be more severe.

In the administration, and proportioning of calomel as a remedial agent. we are governed by age, idiosyncrasy, and contra indications. The average dose usually employed in this country, is from gr. v. xv, though often given in much larger doses. In England gr ij-x are considered sufficient; whilst the French give still less, a difference owing to education, and an antipathy that exists in every country, except this, to any foreign innovation.

But it has been shown though not generally practiced upon, that small doses act

more energetically, than large ones, being divested of the Sed
ative action attributed to large ones, whi.
ch if substantiated, will bring the French
nearer the correct quantity, than their neig
hbors, or ourselves. Who is right I will
not presume to decide, but one thing is
evident; that although its wide range
of application has not been lessened,
its dose has been within the last few
years in this country, and doubtless
with good effect.

We come now to the examination of its
therapeutical application, which subject
I shall be obliged to treat cursorily for
obvious reasons; only touching upon those
points in which, it is of undoubted efficacy.

In the treatment of febrile diseases gene-
rally, where the use of a purgative is req-
uired, no article could be selected that
would be more efficient, in removing mor-
bid secretions, and inducing healthy ac-
tion than this one.

In the management of Yellow and Bilious fevers, much respectable testimony regard it, if not indispensible, a most valuable agent from its special and powerful influence, in depleting the liver.
In congestive fevers, its powers of equalizing the circulation, renders it a means of signal advantage, in removing the morbid condition
But of all disorders with febrile tendency, in none has it a wider range of applicability, than in inflamatory fevers, for which by universal consent it is acknowledged to be, the best remedy, when premised by venasection. And more especially is it appropriate, where the fever is symtomatic of inflammation in serous tissues. The tendency which these tissues have to an effussion of Sympth, is completly controlled, or prevented, by its action upon the absorbent system, which property renders it an important remedy

in the treatment of pleurisy, peritonitis, iritis, opacity of cornea produced by effussion of Lymph between its tunics, and also membranous Croup,

In acute dropsical effussions, it forms a very important part of the treatment; in subducing, and altering the condition of system, upon which it depends, and increasing the activity of the absorbent system, thereby lessening the amount of effussion.

Where dropsy is dependent upon Hepatic obstruction, preventing the free return of venous blood, this remedy is found useful.

Its specific effect says mr Walson possesses some utility in arresting hemorrhage, which usefulness I fear is much impaired, by the length of time required to produce this state. It might however prove useful in removing Chronic hemorrhagic conditions.

Diarrhea, Dyspepsia, and numerous dis-

orders, have been treated sucessfully with Calomel. In jaundice its virtues are often most satisfactorily displayed.

And in those perplexing complications of disease, in which all the ingenuity of the practitioner is baffled, in endeavoring to make a clear diagnosis. When it becomes necessary to strike a blow in the dark, this agent is selected as being the most Protean in its remedial powers, and it not unfrequently happens, that even under these inauspicious circumstances, ~~that~~ it produces beneficial results.

In that wide spread, and terrible disease Syphilis, though many remedies are much reccommended, and are of undoubted efficacy, No drug has greater or more universal sway, in the opinions of our most prominent and talented Physicians, as being the remedy in Syphilis, that most effectually

secures patients, from secondary and ter-
tiary-Symptoms
Such is a rapid and imperfect sketch
of the history, properties, and effects of
this medecine, and though fully conscious
of my own inability, to do the subject jus-
tice, I feel confident, that could the ma-
ss who deprecate the use of this med-
cine, by any means wether natural, or
supernatural, be made conscious how
much humanity is indebted to it, for
the relief of disease, and suffering,
they would regard it as a most God
like benefactor, and rear a shrine to
this potent medecine, that would be as
eternal as the hills.
In its administration however, we must
avoid giving it in those cases, where the mor-
bid action, approximates to its own action.
In cases of Erysipelatous inflammation,
having a disposition to Gangrene; in Scrof
ulous diseases, in inflammatory complaints

attended with general debility, and an irritable condition of the nervous system, or a manifest tendency to take on a typhoid condition.

But it is well to remember, that where the disease is urgent, in scrofulous diatheses, more mischief may be produced by witholding, than by giving it.

An
Inaugural Dissertation
on
Ergot,

Respectfully Submitted
to the
Examination
of the
Provost, Regents, and Faculty of Physic
of the
University of Maryland,
for the
Degree of Doctor of Medicine
by

Frederick Maund
of
Maryland.
A. D. 1848.

Ergot.

In selecting a subject for my Thesis, I judged nothing would be more acceptable, than an Essay upon the Medical History & uses of Ergot; a subject upon which numerous controversies have been written. – I intend to bring forward nothing new, (as I have not had any opportunities to do so,) but to search for the truth, as far as I am able, from my reading.

Ergota. Ergot. Spermoedia clavus. Natural Order, Fungaceae. Spurred Rye (Secale cornutum)

The earliest account of this desease of rye, and of its pernicious influence on the human system, with which we are acquainted, is contained in a letter from M. Dodart to the editor of the Journal des Savans, published in March 1676. The facts were communicated a few years before, on account of the desease which Ergot produces, having been very prevalent

The grains of rye affected by the Ergot, are of a purplish black colour, of a cylindrical form rounded at their extremities of a firm, horny texture covered with a powdery substance, (the nature of which is not ascertained), white within, and when dry are harder and more compact than the natural grains, and have no disagreeable taste. They are considerably longer than the other grains, some of them being fourteen or fifteen lines in length and two in breadth: seven or eight are sometimes in one ear. – They are obviously, not foreign substances engendered between the grains of rye, but the true grains, surrounded with their proper coats, in which the place of the germ is discernable.

These grains were called ergots' spurs, in Sologne; in Gastinois, where they were also

known they were termed bled corn. In various other places this diseased rye has been called secale cornutum or cornutatum (the name by which it is generally called at present) secale luxurians Claves secalinus, mater secalis, or mutter korn (by the Germans) or womb grain mutter signifying womb).

It is stated on the authority of Haller, that ergot effects rye only, or two or three other Alpine plants of the grass kind. It has been confounded with two other diseases which effect rye & wheat; viz. the rubigo or mildew, and the ustilago, brulure or blight; the former, being characterized by the appearance of a redish yellow powder, of a glutinous nature, adhering to the stalk and head of the corn; and the latter, by a blackness and degeneration of corn.

The ergot is particularly observed in rye in wet seasons, and more especially when a wet spring is succeeded by excessive heat.

Ergot yields a deep brown tincture with alcohol, which on evaporation, leaves a considerable portion of wax; it also yields a bitter and sourish extraction and crystals, which have been supposed to contain morphia. It is sometimes adulterated with casts of Plaster of Paris, coloured to resemble it.
Mr. Wright gives as the result of his chemical analysis, the following constituents and their proportions: viz. in 100 grs of ergot, he found of a thick white oil 31.00, osmazome 5.50 mucilage 9.00, gluten 7.00, fungin 11.40 colouring matter 3.50 fecula 26.00, salts 3.10; loss 3.50. Differing from sound rye chiefly in the presence of oil osmazome, and fungin.
Spurred rye appears to act as a poison on all animals. Mr Wright (ut supra) concludes, from numerous experiments on animals, that solutions of ergot injected into the arteries and veins, affect chiefly the brain

and the nervous system, sometimes the spinal marrow by paralysis, but sometimes the brain by coma before paralysis. Its effects differing according to the strength of the solution employed. In a concentrated form, it appears to paralize the system instantly, no resistance to its effects being discoverable. A milder preperation causes for a time great excitement; the nervous energy is raised, but sinks eventually under the influence of the poison. The effects are much greater when introduced by the arteries, than by the veins. It appears to exert its deleterious effects through the lymphatic system; its activity seems to be correspondent with the relative absorbent power, or varied sensibility of different membranes. When given in large doses by the stomach & rectum, a local irritation is produced upon the parts with it comes in contact, in the stomach, producing

nausea, vomiting, hiccough, when in the rectum tenesmus and by sympathy, dysury and priapism. In man, in a dose of two drachms, it excites giddiness, headache, flushed face, pain, and spasm in in the stomach nausea, vomiting, colic, purging and weakness in the limbs. In these cases two sets of symptoms have been observed the one, characterised by violent spasmodic convulsions; the other, by a depraved state of the constitution, running down into a remarkable form of Gangrene generally denominated Dry Gangrene.

The dry Gangre occurs from other causes than the Ergotted rye, an account of a whole family, at Wallesham in Suffolk who were seized and mutilated or destroyed, by Gangrene of the lower extremities. Although the symptoms were exactly those of ergot rye yet, in this case, no

rye was eaten nor could any other cir-
cumstance in the diet or economy of the
family be discovered, to which gangrene
could be attributed.
Bread made of the ergoted rye, does
not differ from ordinary bread in point
of taste. The rye is more pernicious when
new, and its effects are not observed un-
til a considerable time after it is eaten.
M. Noel affirms, that it loses its dele-
terious qualities altogether, after being kept
a few months in sheaf; And writers gen-
erally agree in stating that the desease,
which the ergoted rye induces, is prev-
alent only at the conclusion of harvest,
and ceases before the commencement of
winter, and that it is generally observed
amongst the poor, who are unable to
procure wheaten bread in those seasons
of humidity and scarcity.
The symptoms of gangrenous ergotism,

are summed up as follows, by Dr. Christison, in his chapter relating to poisonous grains: It commences with a general weakness, uneasiness, and a feeling as of insects creeping over the skin; when these symptoms have lasted some days or weeks, the extremities become cold, white, stiff, benumbed, and at length so insensible that deep incisions have not been felt. Sometimes there is bleeding from the nose. In some instances the fingers, arms, afterwards the toes & legs shrivel, dry up and drop off if let alone. In milder cases, the precursory symptoms are nausea and vomiting with gangrene accompanied by dark vesications.

The treatment is emetics, laxatives, and frequent small doses of opium. The patient will generally recover if the unwholesome food is withdrawn from the stomach, in reasonable time.

The most remarkable medical effects of Ergot

are upon the gravid uterus. With some it has a high reputation; while with others, it is as seriously condemned. We will now examine its claims in the Practice of Midwifery. This substance appears to act specifically upon the Uterine fibres, causing them sooner or later to more or less violent contraction. It is not the alternate contractions alone that is increased; the tonic is also powerfully augmented, which is of much value, since it can, in consequence of this power, be most advantageously employed in many cases, where this effect is all important. Dewees certifies, that he has never witnessed haemorrhage, after the administration of Ergot, while he has after opium, oil of Cinnamon volatile alkali &c or the mechanical stimulus of the forceps, vectis, or the hand.

The promptitude of its action is another remarkable fact. If it do not manifest

its influence in twenty minutes, or half an hour at farthest, it utterly fails. It is generally so extremely prompt, as sometimes, to create a doubt of its agency in the minds of those, unaccustomed to its operations. By some, this sudden action of the uterus has been attributed to coincidence, rather than, to the effect of the remedy. This sometimes is certainly the case; but it would be unfair to declare this to be the case always.

Others have attributed its action to the imagination; and amongst these the late Prof Hall of the University of Maryland, who asserted in his lectures, that he had given it in cases when the contractions were too feeble to expel the foetus, with the hope to increase the contractions, with the regret of finding the powers of the Uterus, instead of being increased, cease altogether

Authors vary much in their statements of their success with this grain. This may partially be accounted for, by the medicine having lost its quality from long keeping as there is no medicine which requires greater care for its preservation. It should be kept in closely stoped vials - and for not too great length of time.
It may also be owing to the patient not being susceptable to the peculiar ~~idio-~~ ~~syncrasy~~ influence of this medicine.
We know that some persons owing to a peculiar idiosyncrasy, will not bear the use of mercury or opium; and we may easily believe judging à priori, that some constitutions will not admit of the peculiar effects of the ergoted rye.
That Ergot undoubtedly possesses strong influence on the uterine system, (is substantiated by the writings of the most eminent of the professions) and that if exhibited improperly,

may likely do a great injury.
Therefore, there are many cautions necessary to be attended to: Firstly it must not be thought of in any Case, where a disproportion exists between the head of the child and the pelvic cavity; Secondly, where there is a disposition to rigidity of the parts either the os uteri, the vagina, or the perineum through fear of laceration; Thirdly it must not be given in any case, where the lingering labour depends upon malposition of the head; and Lastly, it must only be given in cases where the sole cause of the delay is a torpid or enfeebled state of the uterus, or when it is desirable to terminate the labour speedily, in consequence of haemorrhage.
It is one of the remedies mostly to be relied upon in uterine haemorrhage principally when the uterus is in a relaxed and flaccid condition, as it sometimes is after the child has been born and the placenta has not

been expelled and by giving ergot bringing about contractions of the uterus and by these contractions closing the open mouths of the blood vessels.

It is sometimes giving in epistaxis and by its astringent action has produced the happiest effects.

This drug has been exhibited in various forms chiefly in powder, infusion, decoction and tincture. If given in powder about twenty grains is the proper dose; if in infusion, two drachms may be infused in four or six ounces of boiling water, for twenty minutes, a fourth part of the the strained liquor, to be given at a time, to be repeated every quarter of an hour until it produces its desired effects but if its effects are not produced, after two or three doses of the remedy has been given, it had better be withdrawn as some injurious con

sequencies might be produced either upon the mother or the foetus.

I have now concluded the subject of the Medical History and uses of Ergot not as it deserves; but I have thought it better to be concise, rather than to continue with unnecessary minuteness and tedious repitition.

An
Inaugural Dissertation

On
Bilious Remittent Fever
Submitted to the examination

of the
Provost, Regents, and Faculty of Physic

of the
University of Maryland

for the
Degree of Doctor of Medicine,

by
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of White Haven
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Bilious Remittent Fever

This is the most prevalent fever (except the Intermittent) in the United States, especially in the Middle, Southern and South Western sections. In fact it is the epidemic of all low and paludal districts of hot climates, it prevails in the southern countries of Europe, in Africa and in the East and West Indies.

The cause of this fever is marsh Miasmata or Malaria — a specific effluvia or emanation from the soil during the heat of summer, after it has been overflowed with water the past winter — for instance Physicians (on whose authority reliance can be placed) state that in the valley of the Mississippi, if there is a freshet in the summer so as to keep the soil damp untill late in the fall they are not troubled with this fever.

From this statement and from those I have seen of a great many other authors, I infer that malaria is a specific cause producing on the human system a specific effect, and that effect is in proportion to the quantity imbibed into the system, and the susceptibility of the system to the malarious influence

The Bilious Remittent and Intermittent fevers I consider to be the same disease, produced by the same cause.- the great difference being in the different effects produced on different parts of the system.

For my opinion is- that Intermittent fever is produced by such a quantity of malaria being imbibed, as is just suf-ficient to affect the nervous system.

The Bilious is produced by a greater quantity of Malaria being in the system, deranging both the ner-vous and hepatic systems.

I considder it useless for me to say any thing more on the causes of Bilious Remittent Fever - I shall therefore proceed with the symptoms. The milder form of Bilious Remittent fever is frequently preceeded for a few days by sluggishness, languor, bitter taste in the mouth, nausea, no appetite for food, a sense of uneasiness and fullness about the epigastrium, sometimes costiveness, and almost always pain and heaviness over the eyes, or more or less headache.

The attack is generally ushered in by a chill or a mere sensation of coldness, especially about the back and arms, which, after a short time, sometimes not more than half an hour, oftener an hour or more; is followed by increased heat of the whole surface - the skin becomes at the same time dry and constricted, the face flushed and swolen,

the eyes red, the respiration hurried, pulse quick and frequent, but not tense, the strength is greatly prostrated with restlessness and wakefulness.

The patients complain of pain and fullness of the head, pain of the back and extremities and of a draging kind of pain or tension at the epigastrium, which often exhibits tenderness on pressure. The stomach is always to a considerable extent irritable — some cases attended with nausea, while others reject every thing they swallow. Sometimes spontaneous vomiting comes on, it is often present at the beginning of the disease, but more frequently it does not set in untill the second or third day sometimes later; the matter vomited is of a yellow or greenish colour.

The tongue is generally moist, red at the sides and edges, coated near the median line and back part, with a light-brown

a yellowish fur, which is often of considerable thickness. Thirst is usually very great — bowels costive, the urine increased in colour but diminished in quantity, and after a few days continuation of the desease, the eyes and skin acquire a yellowish tinge.

The exacerbations last from eight to twelve hours, when all of the most prominent symptoms abate, and frequently a moisture breaks out on the surface, and the patient gets a little refreshing sleep; but more frequently, however the surface remains dry after the fever subsides, and the patient during the remission continues restless, uneasy and watchful.

The remission varies in proportion to the severity of the attack, after which another exacerbation comes on equal to the first, if not increased in violence.

The symptoms I have described are those of the mild form of Bilious remit-

-tent fever, but there is a form more severe, called by practitioners the inflamatory form, in which all of the symptoms of the mild form are greatly increased, with longer continued exacerbations and shorter remis-sions. During the exacerbations the skin is very hot, intense pain and sense of ten-sion of the head, not able to bear light or sound, sometimes delirium, great thirst, a feeling of constriction or oppression of the chest, the pulse is quick and tense, some-times irregular, vomiting often distressing, the matter vomited is generally of a dark or green colour, tenesmus and griping often attend the alvine discharges, and they are large, dark, tenacious and offensive.

There is always tenderness at the epi-gastrium on pressure, and generally nausea or vomiting. The Skin acquires a yellow or brown colour which is more dis-tinctly marked on the face and breast.

The succeeding exacerbations increase in violence (unless the fever is subdued by suitable treatment,) and the powers of life become exhausted, and then comes on what practitioners term the typhoid type, distinguished by the surface being generally covered by a cold sweat, pulse small and weak, the tongue covered with a black coating, sometimes dry, the breathing quick and difficult, abdomen often tympanitic, stupor sometimes comes on, often involuntary discharges from the bowels take place, and lastly comes death.

The gastric form of remittents is distinguished by a nauseous taste, desire for drink, troublesome vomiting, sometimes so severe as not to be subdued by any remedies - the matter is generally green or black, disgust for food, a feeling of anxiety at the praecordia, tenderness at the epigastrium, constant pain of the forehead, also of the

loins and knees, a thick coating of yellow mucus on the centre of the tongue with red tip and sides; the remissions are more marked than those of the inflamatory form, the tongue after a few days of the desease becomes dry and covered by a blackish crust, after the separation of which the tongue is smooth and red.

There is still another form of fever to describe under this class — one which has attracted the attention of the practitioner but a few years, and which has in the Southern and western states supplanted the inflamatory fever to a great extent — this is the Congestive form, to which, above all others strangers are most subject, and which proves to be the most fatal of the various forms of Bilious fever.

The principle symptoms of Bilious Congestive fever are, diminished temperature, want of sensibility to the surface of the

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body, the skin soft and wet with a profuse perspiration, when reaction does take place it is not considerable, and then only on particular parts of the body: there is great debility; the head sometimes affected with vertigo and with a dull pain or a sensation of tension; the eyes are heavy and dull, the countenance haggard, the face of a dingy yellow appearance; the pulse small, frequent and sometimes variable; the voice often changed; the respiration laborious.

The tongue is changed but little at first, but if the first stage of the disease is marked by much excitement it is of a dark brown. The stomach is often irritable, the epigastrium and right hypochondrium are tender and swolen, the bowels are torpid, when stools are obtained they are dark coloured, and attended with tenesmus. The mind is often dull and

confused, and often sinks into a state of stupor or delirium. The remissions in this form of fever are not well defined or they are wanting altogether, the appearance of the desease is that of a gradual increase in severity.

Cases which are brought to a fatal termination - death generally takes place between the sixth and fifteenth day, and is mostly preceded by hiccup, involuntary stools, and hemorrhage from the stomach or bowels.

This form of Bilious remittent fever, may come on suddenly, then it is apt to take on a malignant form, and end quickly in death; in some cases it is preceded by symptoms similar to those of the milder forms of Bilious fever. In attacks which are more violent the system becomes prostrated after the very first exacerbation: reaction takes place feebly if at all: the skin is

covered with a cold sweat: the pulse weak, the stomach is irritable, with frequent efforts to vomit, the countenance is pale or livid, there is often delirium and fainting. In some cases the patient is in a state of lethargy, in others great anguish, attended with groans and shrieks.

Few such exacerbations as I have just described prove speedily fatal, though the remissions in this form are well defined, and a ray of relief and hope appears. Usually the third or fourth of the above described paroxisms close the frightful scene.

These appearances of congestive fever are evidently the effects of the due action of the heart and lungs being hindered or lessened, in consequence of the blood not being duly arterialized, — in passing through the lungs it collects in large quantities in the adjoining organs.

And as I have made mention before,

of the nerves being affected by the primary exciting cause of the disease, gives rise to all those other phenomena which are peculiar to this form of fever.

The morbid anatomy of this disease, as described by the various authors I have consulted, is so imperfect, and upon the certainty of which nothing can be placed, that I consider it almost useless to state it — though I will give some of the principal lesions. The brain, lungs, liver, stomach, spleen and the glands of Peyer and Brunner are all said to have been found in a morbid state — not in the same subject, nor in the same form or stage of the disease, nor by the same author — but by different authors, in different subjects, and in different forms and stages of the disease. The morbid appearances of the stomach are described as being various, sometimes in a state of injection, with increased

redness of the mucous membrane, and thick-
-ening or softening of that membrane. the
liver enlarged and inflamed, with the
lower edge livid, the gall bladder disten-
-ded with bile, The glands of Peyer and
Brunner are said to be greatly developed,
and occasionly ulceration to have taken
place, especially in the glands of Peyer.

The Spleen is said to be engorged with
blood; that being the case no doubt in
those patients, in which the attack is
ushered in by a severe chill; or in
those which take on a congestive form.
the brain and lungs are said also, to be
in a state of congestion and inflamation.

As I have given the symptoms of the
various forms of Bilious remittent fever
separately, I shall try to give the treatment
suitable to each form separately also—

First I shall describe the treatment of
the milder, or first described form.—

As to blood-letting which is the first thing to be considered in all diseases, I do not consider as an appropriate remedy in this form of the fever, not that it would be injurious, but that it would be useless, as the disease can be cured as well without, as with it.

The next thing to be considered is the propriety of giving purgatives — they are indispensable; the most suitable being the mercurial, as calomel or blue mass.

Calomel produces the best effect and should be given as soon after the disease sets in as possible for the effect is as great when it is given during the fever as at any other time, for the object in giving a mercurial purgative is to relieve the congested state of the Portal system, and in so doing to prepare the system for that more appropriate remedy and specific — Quinine. Quinine should be given next morning (for the fever usually com-

-mences in the evening and goes off in the morning, when the remission takes place and continues untill near the same time which the first exacerbation took, place) in broken doses - say five or ten grains every hour or two according to circumstances.

Some practitioners in the Eastern Counties of Virginia give salts in combination with quinine, and contend that while it acts as a purga-tive in clearing the vitiated secretions from the intestines, that it never in-jures the specific effect of the Quinine but in my little experience I have seen the use of Opium very beneficial in checking the Quinine from passing of by the bowels.

If a second exacerbation should return, though it is not likely there will, we should pursue the same plan of treatment ~~as~~

I have prescribed, with increased doses of quinine. During the fever iced water or lemonade is very grateful to the patient and frequently lessens the severity and length of the fever. By proper treatment this form of fever is cured in two or three days.

In the highly inflamatory form of this fever, blood letting is the first remedy to put into effect, to lessen the arterial ex--citement, which is very great.

We should bleed largely, so as to lessen the violence of the exacerbation: also one large bleeding is better than several in prevent--ing any local determination — but if the following exacerbation should come on with much severity, we must resort to depletion the second time, though not to so great an extent. Local blood-letting is sometimes demanded, where there is intense pain of the head or delirium, or with pain

of the back & loins. Blood-letting should be followed by purgatives - calomel and rhubarb or a dose of calomel followed by castor oil, so as to obtain two or three stools a day untill a remission takes place, to justify us in giving quinine, which should be given in the same manner I have prescribed in the treatment of the simpler form.

If we can catch a remission long enough to give four or five doses of quinine, I think there is no danger to be apprehended from a return of the exacerbations. but if we should suspect a return of the exacerbations, and an increase in severity, it is better not to waste time in giving divided doses but give a large and decided dose at once (say 20 or 25 grs) so as to act, as a sudorific and sedative or at least most practitioners consider that it acts as a sedative when given in large doses, though I believe that Dr. Chew does not consider it as such.

As the typhoid type of Bilious fever is most apt to follow the highly inflamatory form, I conceive this to be the most appropriate place for the treatment — which consists in supporting the sinking powers of life, by giving stimulants as wine, porter, brandy, carbonate of ammonia, decoctions of serpentaria and bark, blisters or sinapisms, with light but nourishing diet.

I think that small repeated doses of quinine would be useful in this type of the fever — but sometimes the powers of life sink so fast, that every exertion on the part of the practitioner is not sufficient to save the patient.

In treating the gastric form of Bilious fever those remedies should first be put in force which we know have some efficacy in allaying the vomiting and great irritability of the stomach, such as blood-letting from the arm, if the case will admit of it.

if not, can take blood by cups or leeches, over the epigastrium, or blisters may be applied to the epigastrium, which often proves beneficial in cases of irritability of the stomach, also iced drinks, effervescing draughts, minute doses of calomel say from 1/4 to 1/3 gr. at short intervals. In some cases the acetate of lead in 1 or 1½ gr. doses given every hour or two, will allay the vomiting when every thing else has failed; but too often every remedy which we may use proves useless.

If we succeed in allaying the irritability of the stomach (the remissions being generally well marked) we can pursue the treatment prescribed for the other forms; which is calomel and quinine, given in suitable doses. But if the quinine should have a tendency to increase the irritability of stomach, we should give some of the preparations of opium, of which Dover's powder is the most suitable

in keeping the irritability allayed, and acting also as a diaphoretic. Or we can give the quinine in injections to the amount of 20 or 25 grs. or can sprinkle it on a denuded surface, either of which modes of administration, it will have its specific effect to a great degree.

In the congestive form of Bilious fever, which is the last I have to sketch the treatment of; our attention must first be directed to the internal organs, in relieving them of the congestion: the treatment suitable for which, consists in the application of heated bricks, or bottles of warm water to the feet, the side, and axillas, sinapisms to the epigastrium, and along the spine, mustard foot baths, hot baths & cold bath have all been used successfully in relieving the congestion; also bleeding is an excellent remedy in relieving the congestion — in fact it is (sometimes) the best, provided proper attention is paid to

the effect produced on the pulse; and in some cases where there is congestion of the brain, marked by coma; we must make use of both general and local blood letting. we must take blood from the arm, and from the temples & back of the neck by cups or leeches; we must also apply cold applications to the head, and warm applications to the feet to act as revulsives.

The internal remedies in the mean time should not be neglected. Opium should be given for its stimulant and antiemetic effects, and for the purpose of preventing the profuse alvine discharges. If opium should offend the stomach we should give some one of the salts of morphia as a substitute. The only contraindication to opium is disease of the head marked by delirium or stupor. We should use frictions with stimulating lotions to excite capillary circulation.

Calomel is useful to relieve the torpor of the liver: also should give quinine and capsicum to act as internal stimulants. In some parts of the country, especially in the South and South west, the physicians give quinine in very large doses from 20 to 60 grs at a dose, combined with Opium if there be no congestion of the brain. Camphor, spirits of turpentine have been given with advantage as stimulants, but the spirits of turpentine should not be given, if there be diarrhoea, but if there be, we should give small and repeated doses of acetate of lead or kino. After reaction is established we should continue the use of quinine so as to prevent ~~the~~ a return of the paroxism.

During the period of convalescence due regard should be paid to the patient, so that he will not be exposed to the

sudden changes of temperature, also he should not be fatigued by sitting up too soon or too long at one time. His bowels should be kept regularly open, which can be done in most cases by attention to suitable diet; but if they should become constipated, we should give some laxative so as to procure an evacuation daily. The patient should at first be confined to farinaceous articles of food; and as his digestive powers increase, can allow plain cooked meats &c.

Frequently after the patient gets tolerably well, so much so, as to take exercise in the open air, there remains a chronic disorder of the biliary ~~disorder of~~ system; so that the patient has shortness of breath, a yellowish hue of the skin and sclerotic coat of the eyes, and scanty, high-coloured urine, with lateritious sediment. This chronic disorder should be treated by giving small

doses of blue mass daily. The vegitable tonics should be used such as gentian, colombo, and quassia. The infusion of quassia is considered the tonic in this state of the system. Some physicians prefer the use of dilute nitric acid in this disorder of the biliary system.

In conclusion I must state that all the symptoms, I have laid down are not always present; nor is the treatment I have described always suitable; nor can there be any one mode of treatment laid down; for I maintain that every practitioner must exercise his own judgment, not only in this disease but in all others.

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An
Inaugural Dissertation
on
Scurvy,
Submitted to the examination
of the
Medical Professors
of the
University of Maryland
for the
Degree of Doctor
of
Medicine

Feby 1st 1838

An
Inaugural Dissertation
on
Scarlatina,
submitted to the examination
of the
Medical Professors
of the
University of Maryland,
by
John Hay
of
Pennsylvania

Feby 1st 1848

Scarlatina, however offensive the term to the classical ear of some writers, is now almost universally employed, to designate an eruptive fever, characterized by the peculiarly florid appearance of the eruption, and an inflammation of the fauces occasionally terminating rapidly in ulceration and sloughing. Various other more agreeably sounding appellations have been suggested for this disease, neither of which is more expressive or descriptive of its character than the one we have retained.

This is a disease of comparatively modern origin. Dr Fothergill in his account of the Garrotillo of Spain and Morbus Strangulatorius of Italy, which first appeared in Spain in 1610, and thence spread to Maltha Sicily Otranto and Calabria in the space of a few years, and then broke out at Naples in 1618: says it is the same disease which he describes as the Putrid Sore Throat of London in 1748, which was said by several eminent persons of the Faculty, to have been first taken notice of in London in 1739. The

identity of the Putrid Sore Throat of Fothergill, with genuine scarlet fever is now admitted, though Bateman contends that 1778, the time of Witherings publication is to be considered as the date of the correct diagnosis of this disease. Its first appearance in this country is dated 1735. when it commenced its ravages in New-England, whence it diffused itself over the whole continent.

Scarlatina prevails more in winter, and spring, than in summer, or autumn. usually afsuming the character of an epidemic, being very mild in some cases and proving very malignanant in others. It most generally attacks children but grown persons are also obnoxious to it.

This disease has been divided into three forms by systematic writers. Thus they treat of scarlatina simplex, scarlatina anginosa, and scarlatina maligna. These divisions are however to be regarded as one and the same disease, characterized by different degrees of violence. The three varieties have been known to exist not only in the same neighbourhood, but in the same family simultaneously all originating from the same

contagion, differing essentially in severity but yet the difference between them not exceeding that observed in Typhus Mitior and Typhus Gravior, and in distinct and confluent Smallpox.

Satisfied that the above divisions are merely arbitrary, and that they are varieties of the same disease assuming a milder or more aggravated form, the state of the atmosphere soil, climate, or season of the year, giving the general character to the epidemic, which may be modified in particular instances by the peculiar susceptibility or other circumstances of the patient. I will proceed to the examination of the different grades of the disease.

Scarlatina simplex usually commences with moderate febrile symptoms, which sometimes run high though they are rarely alarming, succeeded by a rash which commonly appears in fourty eight hours, first on the head and neck then successively spreading itself over the whole surface of the body. This rash appears in the form of innumerable red spots, which run into each other and give to the skin a diffused scarlet blush

This form of the disease is accompanied with very little tenderness of the fauces, which usually abates when the eruption is about making its appearance. The tongue is covered with a white fur, the skin is hot itchy and somewhat swelled.

Scarlatina anginosa; the fever and uneasiness in the throat are more severe in this form than in the preceeding variety, nausea vomiting of bile, head ache, and delirium occurring sometimes on the first, often on the second or third day. In the epidemic which prevailed in York during the winter of 1845 and 46. nausea and severe vomiting were often among the first symptoms of an attack. The rash appears later and often changes to a livid hue, in some instances it disappears and reappears at uncertain periods without any change in the general character of the disease The fauces are covered with gray or black coloured sloughs, and very much swollen. The tongue is red along the edges, and covered with a thick white fur, through which are seen the enlarged papillae of a bright red colour. The glands of the neck are

usually swollen hard and painful; much pain and fullness is felt in the head which proceeds from the enlarged glands, preventing the free circulation, and much languor, and restlessness prevail throughout the whole course of the disease: the swelling and inflammation of the fauces often terminating in ulceration, and sloughing, and the inflammation of the glands sometimes ending in troublesome abscesses, This form of the disease has been known to prevail as an epidemic in which the rash was accompanied with a pustular eruption somewhat resembling that of varicella. An account of an epidemic of this kind is given by Dr Richard A Sale as it appeared in Bedford county Virginia in a communication published in one of the January numbers of the Medical Examiner for the year 1840. The treatment was moderately antiphlogistic.

Scarlatina maligna: This form commences by violent febrile symptoms, Delirium usually comes on early and continues throughout the whole course of the disease, with occasional intervals. The pulse is variable in the beginning

it is active, and small in the advanced stages of the disease. The heat of the body is also variable, the accompanying fever being of a typhoid character. The eruption comes out sooner or later and assumes a dark or livid hue as the disease advances. The tongue is covered with a brown fur and is very dry. the breath is usually fetid. The fauces are ulcerated and covered with a tough phlegm. which sometimes so clogs the air passages as to threaten suffocation. The nostrils discharge a thin acrid matter which excoriates the parts with which it comes in contact. A remarkable instance of this kind occurred in this neighbourhood during the epidemic of the winter of 1845 and 46; in which the fingers of several children who were in the habit of thrusting them into their nostrils, to remove the offending matter, became sore and appeared as if they had been immersed in boiling water as far as they had been introduced into the nose. Death usually comes on in the second week. But it sometimes takes place as early as the second or third day. in this variety of the disease

The difficulties that exist in relation to the diagnosis of this disease, arise principally from its similarity to some of the other exanthemata. Measles is a disease with which it is most likely to be confounded. but the following circumstances will enable us to distinguish scarlatina from measles. First the catarrhal symptoms which accompany measles, are seldom or never met with in scarlatina; and if they do manifest themselves at all, they come on after the eruption has made its appearance, and secondly by the character of the eruption itself, which usually appears in the first fourty eight hours in scarlatina and extends itself pretty uniformly over the whole body, being of a darker hue in the groins, and bends of the knees, and elbows, whereas in measles the rash, does not show itself, till the fourth or fifth day. resembling fleabites, which are generally in clusters, appearing first on the face, and neck, and as they gradually vanish from these parts. they appear on other parts of the body and extremeties. Scarlatina might readily be mistaken for miliary fever by the inexperienced

practitioner. They may be distinguished by the character of the eruption, and the perspiration which accompanies the eruption of miliary fever. Dr Graves says, that in sarlatina the eruption disappears on pressure, and reappears from the circumference after the pressure is removed. Some writers speak of an affection of the the throat, which is accompanied by an efflorescence that bears some resemblance to scarlatina, and has the popular title, of scarlet rash. It may be distinguished from scarlet fever, by the following circumstances. The rash appears suddenly without any premonitory symptoms. It is not contagious, it is usually the result of suppressed perspiration and lastly, It does not exempt persons, attacked by it from an attack of scarlet fever. It is however not less fatal than scarlatina in some cases.

In the prognosis of this disease, we should be guarded, particularly in the anginose, or malignant varieties. In simple scarlatina but little danger is in general to be apprehended, yet sometimes it becomes very alarming when least expected.

The former varieties are to be watched very carefully during their course, as they sometimes assume an unfavourable appearance and run their course in a short time, attended by violent and alarming symptoms. The character of the attending fever has also a very important bearing, in the prognosis. In general, very little danger is to be apprehended when the rash makes its appearance at the proper time and is of a bright red colour. The disease passing regularly through from one stage to another attended by a moderate degree of inflammatory fever. If the throat is affected without any eruption, it may be considered an unfavourable symptom. A variable eruption appearing and disappearing, showing itself on one part and then on another part of the body, changing its colour being sometimes red or pale, at others of a brownish hue or the entire disappearance of the eruption are very unfavourable indications. Internal congestions, of the brain, of the thoracic or abdominal viscera, also denote danger. If the fauces are tumefied and of a bright red colour, it is of a more favourable import than when they present a

dark red or livid appearance. White sloughs, augur more favourably than those of an ash gray, or black colour. If great prostration, ensue with delirium. coma, colliquative diarrhoea, and and cold extremeties, death is near at hand. But on the contrary if the heat and eruption disappear with a peeling off of the cuticle, and a separation of the sloughs, a favourable result may be anticipated. Children when attacked by this disease usually bear it better than adults. In pregnant women it is most generally fatal.

Scarlatina depends upon a specific contagion. It agrees with the other contagious exanthemata, in destrying the susceptibility to a second attack. But in regard to this, there is a difference of opinion among writers, some of whom asert that they have seen a second attack, in the same individual while others on the contrary, doubt the correctnes of the diagnosis in such cases. Dr Withering, says he "has never seen an instance of the same person having the scarlet fever twice". The alleged repetition of it may probably

have been some other eruptive disease resembling it. The period which intervenes from the first impression of the contagion, and the time the disease first manifests itself is from four to six or eight days. The contagion is said to be most active about the time the skin is peeling off. Some persons are wholly insusceptible to its influence, and never become affected by it however much exposed to its operation. The contagion seems sometimes to linger in districts in which the disease had previously prevailed as an epidemic, affecting various individuals in different sections of the district from time to time. This appears to be the case at present in York county as we hear of cases occurring in various parts of the county, which are supposed to arise from the contagion which still lurks in the neighbourhood since the epidemic which prevailed here in the winter of 1845 and 46. It is also very tenacious, clinging to the clothes and furniture of persons who have been affected by it. There are numerous instances of this kind on record. one of whicich is related by

Dr Chapman of Philadelphia in a lecture published by him a short time ago, in which he states that he attended a boy affected by this disease, whose parents, anxious that the rest of their children should ~~s l l~~ escape this formidable malady had them all sent to the country. The house was freely ventilated, and the fumes of the chloride of lime filled the apartments for many days. But with all these precautions. the contagion was not removed, for at the end of some twelve weeks, the children returned home, and several of them were attacked by it, as was supposed, through the medium of some domestic fomites, as they were not exposed to the contagion elsewhere.

Pathological Anatomy has thrown but little light upon the nature of this disease. In some cases we find no morbid changes whatever, death having taken place from the violence of the poison upon the system, before any anatomical lesion could be produced. In others again the violence of the cutaneous inflammation, carries off the patient, without affecting any of the

internal organs. Sometimes we find inflammation of the membranes and substance of the brain, the thoracic, and abdominal viscera. The fauces are found covered with exudations of lymph, which during life were supposed to be sloughs; in other cases are found deep seated ulceration arising from the gangrenous inflammation of the the throat. In Graves' clinical lectures, chronic inflammation and enlargement of the liver is said in some cases to be the result of the generally inflammatory diathesis of system, superinduced by scarlatina. We sometimes find inflammation of the mucous membrane of the alimentary canal, supposed to be produced by the irritation of the acrid matter which is furnished by the ulcerated fauces. Inflammation of the trachea is said to be the cause of death in some cases.

This like other of the exanthematous diseases, is succeeded by a susceptibility to take on troublesome and sometimes serious diseases, the most common of which are anasarca, ulceration of the

tonsils, and suppuration of the glands of the neck, refered to before, deafness otitis, opthalmia, bronchitis and sometimes great derangement of the nervous system, indicated by the occurrence of chorea, epilepsy, hysteria, spasmodic asthma, &c. There is often as a consequence swelling and ulceration of the larger joints, with hectic, and its attendants. In some cases permanent deafness has resulted from suppuration within the cavity of the tympanum, which is followed by a fetid discharge, that is often very difficult to get rid of, and sometimes remains for months.

On the treatment of this disease much has been written, and a great deal said by different practitioners, who entertaining different views of the nature of the disease, have recommended different and even directly opposite methods of treatment. Some considering it a disease of debility, recommend a stimulating or tonic, plan of treatment, others again class it among the inflammatory diseases, and treat it antiphlogistically, while others deem it prudent, not to meddle unnecessarily with the efforts of nature to rid herself

of an irritating poison. This diversity in the treatment recommended, can be accounted for only on the supposition, that the different cases successfully treated under the different and directly opposite plans, must have been cases differing in their character, and although these discordant views &c. recommended are calculated to confound and distract the practitioner, he who has fortified himself with a knowledge of the principles of medical science will calmly and deliberately regulate his treatment with the varying nature of the disease, and accommodate his practice to the peculiarities of each case. Dr Rush remarks "That however excessive or deficient nature may be in her attempts to throw off febrile diseases, she rarely errs in pointing out the manner or emunctories, in or through which it ought to be discharged. The business of a Physician is to follow her, but it should be with depleting or cordial medicines in his hand, in order to assist, restrain, or invigorate her".

The treatment of Scarlatina simplex requires but

little interference on our part. The antiphlogistic regimen, with an emetic, or an occasional purge, is all that is usually required. In this mild form of the disease, Sydenham remarks "none die of the disorder except from a too great officiousness in the practitioner" whose duty it should be to prevent the active interference of friends, by seeming to be active himself. But sometimes this form passes on to the anginose or malignant variety, and then a more active treatment is required, and we should therefore make it a point, to watch the patient and guard against any unfavourable symptoms that may chance to show themselves, and treat them accordingly. If we are summoned to a case attended by nausea, headache and considerable excitement, we should commence the treatment as if it were about to assume the anginose or malignant variety. These latter varieties require much care and attention on the part of the patients attendants, for as much depends upon the proper regimen in the treatment of this disease, as upon

the treatment on the part of the practitioner. Some writers consider the two last mentioned varieties as diseases of debility, arising from the debilitating influence of the poison upon the nervous system, and recommend a stimulant plan of treatment. Thus Dr. M. S. Baer of the city of Baltimore, says in a communication published in the Maryland Medical and Surgical Journal, that after due consideration he was induced to believe, that the symptoms depend upon the injury done to nervous centres by the poison of scarlatina, and that the only plan of treatment was to sustain the recuperative power of the system. He therefore after attending to the state of the stomach and bowels, depended upon the internal administration of brandy and water, adapting the strength of the stimulus, to the age and strength of the patient, and states that he has been highly gratified with the result of his treatment. There may be cases where the powers of life, in the very onset of the disease, are so completely prostrated by

the operation of the contagion on the nervous system as to justify a resort to wine and other stimulants, although the weight of authority in the generality of cases seems to be in favour of the antiphlogistic plan of treatment. Emetics in the early stage of the disease, are frequently of service not merely by "evacuating the contents of the stomach, and clearing the throat in its passage downwards" but by their action giving a centrifugal direction to the circulation, thus tending to obviate internal congestions and secondary inflammation. and apparently rousing the stricken energies of the system to resist the influence of the poison. Sydenham says "when I have happened sometimes carefully to examine the matter thrown up by vomiting, and found it neither considerable in bulk, nor of any remarkably bad quality I have been surprised how it should happen, that the patient should be so much relieved thereby, for as soon as the operation was over the several symptoms viz. nausea, anxiety, restlessness. deep sighing.

blackness of the tongue &c. usually abated and went off, so as to leave the remainder of the disease tolerable.

A great difference of opinion, has prevailed on the propriety of purgative medicines in this disease, some contending that they are too debilitating in their effects, while others consider them indispensable, and urge their use through the whole course of the disease, Dr Willan says "Purgatives have nearly the same debilitating effect as bloodletting. They are indeed very seldom necessary, for though a few patients may, on the first day be affected with bilious vomiting and diarrhoea, the state of the bowels is more uniform than in other febrile diseases". Dr Sims says that "they were almost never either costive or purged". Dr Fothergill asserts that gentle cathartics have brought on dangerous symptoms, upon procuring a few stools with manna especially when the disease has continued for two or three days, the redness of the skin has disappeared, and the flux to the throat has been surprisingly increased. Late writers however entertain quite a different opinion on this point, and

contend, that next in importance to emetics are evacuations from the bowels by laxatives, and that their judicious employment is the most effectual measure for preventing the colliquative diarrhoea, oedematous swelling &c. which frequently occur in its latter stages. There can we think be little doubt of the propriety of using means calculated to remove vitiated or irritating secretions that may be thrown into the alimentary canal. Dr Hamilton in his work on Purgatives, strongly insists upon their use, and says that the symptoms of debility which occur in typhus fevers, so far from being increased were obviously relieved by the evacuation of the bowels, and that he had never witnessed sinking and fainting as mentioned by some authors, neither had he observed the revulsion from the surface of the body, and consequent premature fading and striking in of the efflorescence from the exhibition of purgatives. He however cautions the reader "against the common association of purging with the use of purgative medicines which are given in the present case, to remedy the impaired action of the intestines and secure the

complete expulsion of their contents, and prevent any accumulation from remaining to aggravate the severity of the symptoms". In the epidemic which he describes he says "the bowels were peculiarly constipated". and that it will be necessary to adapt our practice in the use of purgatives to the nature of the prevailing epidemic. Judiciously administered, agreeably to these suggestions, purgatives no doubt generally prove highly serviceable. Important however as it may be to have the bowels regularly evacuated, there may be cases where the prostration and tendency to typhus might forbid the use of a purgative, and where enemas would afford the most eligible mode of accomplishing our purpose.

On the propriety of bloodletting different opinions have been entertained. In one of the earliest epidemics of which we have any account, it is said "few died who were timely and plentifully blooded, which weakened the fever, relieved the throat, and was the only medicine that removed the vomiting,

and diarrhoea". Dr Morton bled in most of the cases he attended in London. Among later writers Dr Armstrong advises it, and Dr Mc Intosh says "it occasionally occurred to me, to see patients snatched from the grave by bleeding from the nose, and at times when it was thought that the loss of an ounce of blood would prove destructive. This circumstance led me to bleed in many subsequent cases, and I never had occasion to regret it". and relates a case in which ℥XX of blood were drawn from a patient aged eighteen, with instant good effect on the fourth day of the disease, when she had a large sloughing ulcer occupying the whole of the right tonsil. On the other hand Dr Willan asserts that he never saw a case in which bloodletting appeared to be indicated, and that the experience of Dr Withering, Dr Clark, and Dr Sims, on this point agrees with his own. This contrariety of opinion amongst those who have had ample opportunities of examining and treating scarlatina, and testing

employment is often attended with danger of their producing too much irritation of the mucous membrane of the stomach and bowels. Cooling saline draughts are sometimes recommended. Muriate of ammonia in combination with tartarized antimony, or the latter alone, have been favourably spoken of as means to control the action of the heart and relieve uneasiness, which continue after the judicious use of other depletory measures. It has occurred to me, that in cases where after proper depletion there still remained a hot, dry skin more especially if accompanied by irritation of the bowels, the acetate of lead might be beneficial. The use of this remedy as a febrifuge was suggested to my father a few years since by Dr John, L. Atlee, of Lancaster who recommended it in the strongest terms. In his letter to my father speaking of the treatment of Bilious fevers, he says "that where the fever runs on for several days, and there is reason to think that inflammation of the mucous membrane of the alimentary canal exists, the only febrifuge I use is the acetate of lead in doses of from two to four

grains every three or four hours dissolved in in a tea-spoonful or less of vinegar and three or four table-spoonfuls of rain or distilled water. It is a decided sedative, lessning the force and frequency of the pulse, and having a direct influence in relieving the mucous inflammation. Try it and you will never require any other In Typhoid fevers or where Bilious fever runs into that type, I rely on the lead to the exclusion of every other so called febrifuge". I have known it to be employed since with good effect in a number of cases of Typhoid fever, in some of which its use was continued eight, ten, or twelve days, without producing any of the unpleasant constitutional effects usually attributed to the use of lead, It was invariably given in combination with diluted acetic acid. If there be much heat of skin sponging the body with cold or tepid water seldom fails to afford relief. The sponging should be general, and without intermission until the desireable point be attained unless a degree of coldness be produced that might augment the danger of collapse.

Dry cupping may also be practiced with advantage when the state of the patient will not justify the loss of the smallest quantity of blood. If the brain be the organ suffering, in addition to these remedies we may have sinapisms to the feet, and exhibit purgatives conjointly with carbonate of ammonia or camphor.
In other visceral inflammations under similar circumstances, calomel and opium might be advisable with dry cupping, and fomenting cataplasms over the parts affected. In the malignant variety, when sinking and collapse come on, we should trust to the liberal use of wine, brandy, and the carbonate of ammonia, as these are the remedies upon which our principal dependance is to be placed. Cayenne pepper is also recommended by some writers, as a valuable stimulant in this stage of the disease. Chlorate of potass disolved in water has of late been used and highly recommended by some writers, as a drink in scarlatina.
As local applications to the throat and fauces

numerous remedies have been recommended, some writers advising one plan, and others another entirely different, Thus Dr Jackson of Philadelphia in a communication published by him in the 22nd volume of the American Journal of Medical Science, says, that after attending to the state of the stomach and bowels, he has found ice to exert a powerful influence in counteracting the tendency to inflammation of the fauces, and to prevent its further progress when it has already commenced. In fact, in most cases after attending to the general symptoms, he seems to rely upon the ice as a local application, with the chloride of soda as a gargle when the fauces are ulcerated. Dr Edward. C. Keckely of Charleston, South Carolina, on the contrary, recommends the Spirits of Turpentine, and mucilage of Gum Arabic as a gargle, and a liniment of Olive oil and Tinct of Capsicum to be applied to the throat during the day, and wearing a light woolen bag, filled with warm ashes around the neck at night. He says cold drinks must not be used; and we should

avoid the external application of water, as we would the sting of a poisonous serpent. and says that although he "had been induced to consider the disease as almost an Opprobrium Medicorum" after he had dopted the above plan of treatment, he had no fear of the speedy relief of his patients. Dr Chapman recommends local bleeding, blistering. and warm poultices as the best local applications in the beginning of the disease. Dr Watson says that "the swelling of the parotids and neighbouring glands, is evidently caused by the absorption of the irritating and poisonous matter from the ulcerated throat". We think we have seen such swellings, when there was little evidence of ulceration having commenced. If Dr Watson's opinion be correct, we can expect but little benefit from external applications until the source of mischief be removed. It is advisable however, to treat the external inflammation on the same general princiles that guide us in the management of other inflammations by the local alstraction of blood &c. cold applications

so long as there is much heat of the part. If the cold become painful, or evidently unpleasant, it might be changed for warm applications. for there seems to be much truth in the remark of Dr McCartney "that whatever feels good will do good in inflammation". Stimulating liniments might be advisable, if after the great heat of the part had subsided there remained considerable swelling. Should there be any indication of approaching suppration, warm poultices would of course be employed to promote it. Various gargles have been employed in the treatment of the sore throat of scarlatina. Mild and detergent gargles during the early stage of the disease, afford considerable relief to the feelings of the patient. but when ulceration occurs, and gangrene is threatened more active means are to be employed. Barley water acidulated with muriatic acid. a decoction of Peruvian bark. cayenne pepper. tinct myrrh, and chloride of soda. have been recommended. Dr Chapman considers powdered burnt alum one of the best applications while others recommend the nitrate of silver.

In the epidemic of 1845 and 46 to which I have before referred, the Baptisia Tinctoria at the suggestion of Dr McIlvaine of York, was used in several cases of the anginose variety with the most happy effects. It was given in the form of an infusion, in the proportion of an ounce of the root and stalk to a pint of boiling water in doses of two, or three drachms every four or five hours, while a stronger preparation was used as a gargle or wash for the fauces. In Dr Rush's practice, patients found relief from recieving the fumes of warm water mixed with a little vinegar through a funnel into the throat. Emetics says Armstrong "are the best gargles when the throat is much obstructed from an accumulation of tenacious mucous, their operation effectually dislodges that morbid secretion for a time, often greatly relieves the respiration, and improves the appearance of the ulcer".

The treatment of the secondary affections also require some notice in this place. If much debility and prostration be present after the subsidence

of the other more formidable symptoms, we should put the patient on a gently tonic plan of treatment together with a mild nourishing diet. On the contrary if there be much restlessness, with a quick pulse and a dry harsh skin, we should have recourse to a gentle purgative and some of the milder diaphoretics with an unirritating diet. The discharge from the ear which sometimes becomes so very offensive, may often be remedied by the injection of limewater and milk, or a weak solution of chloride of soda into the ear: the application of small blisters behind the ears will sometimes check it. To the enlarged glands remaining after the subsidence of the fever. we have seen the Tincture of Iodine with Soap Liniment in the proportion of ℥i of the Tinct to ℥i of the Liniment, successfully used. The dropsical swellings which often follow scarlet fever, are most generally found to occur where there is left a phlogistic diathes of the system with a frequent, quick, and tense pulse the skin is hot and dry, the urine small in quantity, and

highly coloured, and the bowels generally torpid, and are best treated by keeping up a gentle purging for some time, and the use of the milder diuretics with the occasional use of the warm bath, and a mild farinaceous diet and cooling drinks. If they are complicated with inflammation of the thoracic, or abdominal viscera, bleeding is often productive of benefit. Occasionally however we have dropsical effusions where there is no febrile excitement, when the system is in a relaxed and debilitated condition, where after proper attention to the state of the bowels, the more stimulating diuretics, as squills turpentine, and tincture of cantharides &c. would come in appropriately, and where tonics and a more nourishing diet would be advisable.

Belladonna has recently been recommended as a prophylactic in this disease. We know several physicians who tried it in the epidemic before alluded to, without witnessing its prophylactic powers so much spoken of by many of the European writers.

In conclusion we would remark that Dr Autenrieth of Germany attempts to account for the various opinions entertained of the nature of this disease, and the directly opposite plans of treatment recommended at different times. He says that all diseases contagious and non-contagious preserve a certain constitution, or general character which continues for a number of years in succession with occasional interruptions until it is displaced by another constitution of a different character. Thus during one period, diseases are remarkable for being frequently accompanied by a sensation of extreme weariness, sudden sinking of the strength, and vital powers unpreceeded by any marks of excitement, and a disposition to pass into typhus. During another period the tongue is in general loaded with a thick white or yellowish coat, and many other symptoms of derangement of the digestive organs. During a third period diseases are characterized by a remarkable degree of vascular excitement, an evident tendency to local determinations, a frequent formation of

morbid productions: in a word by all the symptoms of inflammation. The general indications vary of course with the nature of the prevailing constitution, and consequently during one period stimulating remedies, during another alvine evacuations, and during a third the antiphlogistic plan, will constitute the most effectual treatment. This very circumstance has caused much confusion in medical opinions, and has occasioned the reputation and downfall of many an infallible system, each of which is in its turn consigned to oblivion, and perhaps again to be revived as a novelty at some future period,

An
Inaugural Dissertation
On
Enteric Fever
Submitted to the Examination
of the
Provost, Regents, and Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
By
Thos H. Williams
Cambridge
Maryland
March 1848

To

Alex Hamilton, Bayly. M. D.

This essay

Is dedicated as a trifling memento

of his innumerable

Marks of attention and friendship

Bestowed upon, and which will be ever

Gratefully remembered by

His sincere friend and pupil

The Author

To

William Power M.D.

Professor

of

Theory and Pratice of Medicine

In the

University of Maryland

This dissertation

Is inscribed

In admiration of his sound Judgement,

And skill in the Practice of Medicine

By his friend.

— The Author —

"— And what is writ, is writ.
Would it were worthier."

Byron

- Enteric Fever -

It is not my intention or expectation in selecting Enteric fever, as the subject of my thesis, to advance any new doctrine, or discovery that I have made, either in symptoms, pathological lesion or treatment; but merely to state what I have seen and observed in the symptoms, pathological lesions and treatment, agreeing with the truths laid down by the best authors on this subject. This affection has already an extensive synonymy, although not many years have elapsed, since the views entertained at the present day, with regard to it, were first promulgated. It has received the names of Continued fever, Typhoid affection, Dothienenteritis, Follicular enteritis, Follicular gastro enteritis, and Abdominal Typhus. I have adopted the name given to this disease by Dr. Flood, and which nomenclature, I believe is preferred by my learned professor of practice Dr Power. This name is, I think less objectionable than the one given to the disease by Louis, viz Typhoid fever, for this complaint may run its full course without

the occurrence of a single symptom characteristic of Typhus fever, and another great objection is that any other febrile affection may also assume the Typhoid form; I think therefore the name Enteric fever is the better name of the two: it is merely intended to express the fact that this fever is distinguished from all other idiopathic fevers by the frequency of the occurrence of intestinal disease. In the whole Nosology of acute diseases, there is none perhaps, in which the attack is more frequently slow and gradual than in this. In many cases the patient is not able to fix upon the time when his sickness commenced, he will probably say, that, for some days passed he has not enjoyed his usual health. The patient feels badly, and complains, perhaps of a feeling of fatigue, general uneasiness, soreness of the limbs as if he had been bruised, and often of a slight dull headache; the skin is hot, the face somewhat suffused or flushed, pulse frequent; the tongue in the commencement of the disease is not much altered, it is covered with a thin whitish fur; the appetite is diminished or

heat, moderate thirst, with a dry or clean state of the mouth. These symptoms continue for a few days increasing in intensity before the fever is fully established. When the disease is fully formed, the sensations of chilliness, alternating with heat ceases and does not again make its appearance. During this period of incubation, if I may so term it, diarrhoea and colicky pains in the abdomen, are very often present. During the first week after the fever is fully established, the headache increases, and in most cases the patient complains very much of intense pain in the region of the forehead and temples; this headache is often accompanied with soreness and stiffness of the eye balls, felt both on pressure and motion. The expression of the countenance is very marked and peculiar: it is dull, heavy, and listless; indifferent to things going on around him, and is sometimes accompanied with slight delirium. During this period there is great nervousness; the patient lies upon his back, and if requested to sit up

in bed he does it with the greatest difficulty. Complains of dizziness in his head, singing sounds in his ears; one of the most characteristic symptoms at this period, is hardness of hearing amounting often to deafness; the eyes are suffused and injected, increased sensibility to light, but not to such an extent as in Typhus fever. There is a perverted taste in the mouth; tongue red with a creamy fur upon it, slightly dry and sticky. Epistaxis which generally occurs at this time, is frequently if not always a symptom that accompanies this disease, it is generally small in quantity, amounting only to a few drops, in some cases however it is so profuse as to require the tampon to check it; this symptom may occur at any period during the progress of the disease. Thirst in this disease in those cases that I have seen, has always been proportionate to the degree of febrile excitement, cool drinks preferred by some, warm ones by others. The pulse is exceedingly variable in this disease; in some cases it is full, resisting and not over 80 or 90, in others

it is small, compressible and varies from 100 to 120; when the pulse falls below the healthy standard it is a grave symptom. Nausea and vomiting is said by many authors to be a very common symptom: the patients that I have seen labouring under this disease, suffered very little from nausea or vomiting, and is I think by no means a characteristic symptom of this fever, but belongs more properly to Remittent fever, where these symptoms are always present. Tympanites is a symptom that must always attends this affection, and is in most cases present from the commencement to the termination of the disease: during this tympanitic condition of the abdomen, if pressure is applied in the right iliac region a gurgling sound will be produced; this sound is owing to the collection of gas and fluid in the coecum or other intestines. Diarrhoea is one of the most constant phenomena, and occurs amongst the first; at times commencing before the others; at others occuring simultaneously; and being generally - but not always - in ratio with the severity of the attack or the extent of the disease in

the follicles of the intestines. In all the fatal cases that I have observed, the diarrhoea was always very profuse from the commencement of the attack. The stools are most always watery, and of a brownish colour, not unlike that of newly made cider; they emit a fetid and offensive odour: the frequency or quantity of the evacuations is not as good a diagnostic symptom of diarrhoea, as the quality, for one passage from the bowels in twenty four hours provided it is thin and watery, is sufficient to establish diarrhoea in Enteric fever. Enlargement of the Spleen, perceptible during life, has been placed by some among the pathognomonic signs of this disease; in the cases that have fallen under my observation, this symptom has very rarely occured; and if this enlargement did often occur it would be impossible in three fourths of the cases to detect it; the tympanitic state of the abdomen preventing us, from tracing it out by manipulation. Cough and bronchial calls are exceedingly common in this complaint. In some cases the cough is dry, in others it is attended with a slight mucous exploration.

These dry and crepitant rales may be heard more or less distinctly all over the whole chest; they are not present in all cases. Sometimes they commence with the disease; but more frequently not until the lapse of a week. The heat and state of skin varies in different patients. In many patients this heat is quite moderate in degree, and pretty thoroughly diffused over the whole body: in others the heat is intense and of a burning character, conveying to the hand what is denominated "Calor mordax", burning or biting heat. The condition of the skin, in regard to dryness and moisture is quite different in different patients; in some cases the skin is almost constantly dry during the whole course of the disease; in others the skin is moist and covered with perspiration. Not unfrequently the perspiration is profuse, wetting the patients clothes; in some cases it is confined to certain portions of the body, in others extending over the whole surface. So much for the symptoms that occur during the first week. In the second week, the severe headache that torments the patient during the first week is diminished and delirium or stupor takes its place. One of the most pathognomonic

signs of this disease is the rose coloured eruption, which makes its appearance from the eight to the fifteenth day; they appear most frequently on the lower and middle portion of the chest, and upper part of the abdomen; they are generally of a round shape, and although they do not seem to project above the surface of the skin, they can in some cases be detected by passing the finger over them. The greater or less depth of colour of the spots has been regarded by some authors, as indicating the greater or less severity of this fever. This difference of colour I have never been able to observe, and cannot therefore speak with certainty concerning it. The number of spots is also various; sometimes not more than six or eight are perceptible: at others, the eruption is almost confluent. Their size, too, are equally various, larger in some cases than in others, it is generally about the size of a pins head. The colour disappears when the spots are pressed upon by the finger, but returns as soon as the finger is removed. The tongue is now covered with a dark brown fur, or it is dry, gashed, sore, and sometimes bleeds. When the patient is told to put out his tongue, he does it with the utmost difficulty; he protrudes it and then suddenly draws it

in again. The lips are often cracked and covered with dry crusts; whilst dark sordes collect upon the teeth and gums. The pulse at this period is soft and compressible. A new eruption called Sudamina, now makes its appearance; there are small colourless vesicles, generally occurring in great number, and found especially on the neck, the axillae, and the groins. They are owing to the elevation of the epidermis by a small quantity of transparent serous fluid. In some cases the eruption does not make its appearance until the patient is decidedly convalescent, and being of little importance in themselves, and giving rise to no sensation to attract our attention, they are very apt to be overlooked. Sudamina have no particular connexion with Enteric fever, for they are found in most diseases, in which there has existed prolonged sweats, and I have noticed that they are more abundant in this fever, when the patient has been troubled with profuse perspirations; when they make their appearance they remain for several days, and then gradually disappear. At this period the patients symptoms grow worse; he is very feeble, lying on his back, and often

slipping involuntarily down in bed. An irregular muscular contraction or as it has been denominated "subsultus tendinum," now makes its appearance. The patient picks at the bed clothes, or imaginary objects in the air, and gives utterance to wild delirious sentences; during this delirium the patient wants to get out of his bed, to go he knows not where. The thirst is now less: deglutition at this period is sometimes difficult, owing to ulceration of the glottis. Diarrhoea now grows worse, the patient has involuntary evacuations from the bowels, retention of urine, hemorrhages from the bowels, and in some cases petechia and vibices upon the skin. Gangrenous eschars or bed sores are produced on those parts of the body exposed to continued pressure, caused by impaired vitality of the skin. After the second week if the case is to terminate fatally the patients eyes become hollow and sink back into their sockets, his face puts on the Hippocratic aspect; the pulse generally becomes frequent and scarcely perceptible; the extremities become cold and clammy and the whole body is sometimes bathed in a clammy sweat; coma comes on and death follows.

If the disease assumes the aspect of recovery, the tongue throws off its dark brown fur, commencing at the edges; the skin becomes soft and natural; the pulse is not so frequent, but becomes strong and full; the stupor subsides and the patient takes notice of things around him; all dangerous symptoms now subside and convalescence is fully established. I have now completed the enumeration and description of the symptoms that are observed in a well marked case of Enteric fever; some of them are more important, frequently occur, and more pathognomonic of the disease than others. Some of these symptoms are valuable as diagnostic, and others as prognostic indications. It is very seldom that we find them all combined in any single case. Complications, not unfrequently arise during the progress of this disease. The most common one is peritonitis, which is brought on by perforation of the intestine by ulceration, and the contents of the intestine escaping within the cavity of the abdomen gives rise to acute inflammation of the peritoneum. This perforation is said to occur more frequently in males than in

severe attacks of the disease. The symptoms following perforation, are, excessive pain over the abdomen, nausea and vomiting from the commencement of the inflammation; the stools are suppressed; acute pain is felt when pressure is made over the abdomen, and the patient lies upon his back fearful of moving, lest he may increase the pain. The pulse is quick, and the countenance expressive of great suffering. Death usually ~~follows~~ takes place in two days after perforation takes place. Petechiae sometimes arises in the progress of this fever. Bronchitis not unfrequently occurs, and is often so severe as to kill the patient; it occurs more frequently in some epidemics than in others. Pneumonia very rarely is seen complicated with this disease. Erysipelas often occurs in spots on the face, it is seen more frequently in those who die with this fever. Otitis is seen in a few cases, and when it does occur, it is apt to produce deafness, by destroying the membrana tympani. Parotitis also known to occur, and is a very fatal symptom; the worst case of Enteric fever that I have ever witnessed was with this complication; the case occurred in the

Baltimore Infirmary. During the passed summer, this patient recovered under the well directed treatment of Dr. Chew. This is however a very fatal symptom, and is always to be dreaded. Entire fever not unfrequently, when Typhus fever is raging, occurs combined with that disease; several cases of this complication occurred during the passed winter in the Infirmary. Some of the symptoms of both fevers were present at the same time, the petechiae of Typhus first made their appearance, followed by the rosy spots of Entire fever. The Typhus symptoms generally gave way first. March & Duration. The march of Entire fever is generally uniform and regular; in the average amount of cases, the patient grows worse and worse, from day to day, for two or three weeks; or he may commence to get better after the first week. The duration is always in proportion to the severity of the disease; patients having a mild attack, getting well rapidly; whilst in severe cases the patient may linger for a long time before convalescence is fully established; as a general rule however the disease is protracted. Death occasionally takes place so early as

the six or seventh day; but this is exceedingly rare. Generally it occurs in the course of the second or third week, and is sometimes protracted to the end of the sixth week. The average duration of cases may be stated at from twenty to thirty days.

Anatomical Lesions. Follicular enteritis, as the name imports is seated in the follicles of the intestinal canal, commonly called the glands of Peyer and Brunner. In the Stomach and Duodenum, the latter are found in an isolated state; and at the termination of the Jejunum and throughout ileum, the former are seen agglomerated together to the number of thirty or forty, or more, and arranged in oval or elliptical patches. They are also met with in the colon two and two, and even in a larger number. In their healthy state, the glands or follicles of Peyer are raised so little above the surface of the mucous lining of the intestines, and differ so little from it in appearance, that it is very difficult to distinguish them; but when diseased as in Enteric fever, the patches become thickened, and their colour somewhat changed. This appearance differs according to the period of the disease at which it is observed. When examined about a

week from the commencement. They are at times of a dull white colour, but at others of a dark red hue; the hue however varies materially. Their size varies likewise, but they project to a greater or less extent from the mucous membrane, and have well defined margins. The patches are generally of an elliptical shape, especially the largest; which have been observed two or three inches in their largest diameter. The isolated follicles in the duodenum or Brunner's glands, are affected in the same manner as the glands of Peyer. The number of the patches varies; at times there is but one: at others twenty or more; and almost always many of the isolated follicles are affected. The eruption usually commences at the termination of the ileum and the ileo coecal valve, whence it proceeds upwards. Later on in the disease, ulceration is perceptible in some of the patches. These are of different sizes, sometimes being very small, at others occupying nearly the whole patch. These ulcers implicate the mucous, and may destroy the muscular coat; sometimes they perforate the peritoneal coat. The alterations of the glands commence in the submucous

cellular tissue, and from thence extends to the different coats of the intestine, and not unfrequently giving rise to that false symptom perforation. These ulcerations admit unquestionably of cicatrization; this has been frequently witnessed ~~frequently~~, and may occur with or without ~~the~~ formation of a new mucous membrane. The period at which ulceration takes place varies, according to the character of the disease, and is therefore no fixed time for it to occur. The lesions of the glands of Peyer and Brunner are the most constant in Enteric fever; it is said to have been found in ninty-eight cases in the hundred, but all the symptoms may present themselves without the intestinal lesion; and the latter may exist without the presence of the former. The pharynx and oesophagus are sometimes though rarely the seat of ulceration. The mucous membrane of the stomach is very little altered, it is sometimes softened. The condition of the mesenteric glands as might be presumed is dependent upon that of the lining membrane of the intestines. These

glands are the lymphatic ganglions to the intestines, and when any source of irritation exists in the latter, the ganglions or glands become enlarged like those of the axilla and groin, when adequate irritation exists in any part of the upper or lower extremity. The mesenteric glands which correspond with the morbid follicles, may be simply enlarged, red and infiltrated, as in the earlier stages of the disease; or they may be softened and in a state of suppuration in the latter stages. The spleen is generally found in a morbid condition, sometimes hypertrophied and softened; at others, small and denser than natural; it is most always large, softened and diminished in consistency: its colour is generally of a dark brown. The liver is very seldom altered, it is, however, sometimes softened, and its colour paler than natural. The morbid appearances presented in other organs of the body are by no means distinctive. The same

softening of the heart as in Typhus has been met with in this form of fever. The lining membrane of the heart and arteries has been found redder than usual. These lesions cannot be regarded as special to the disease under consideration; for they have been found in other affections. The lungs are sometimes congested: inflammation of the parenchyma is sometimes present: As in other fevers attended with much cerebral disturbance, the encephalon has been carefully examined, but without meeting with any morbid appearances that could satisfactorily account for the phenomena, some serous effusion has been observed. The condition of the blood is not much altered; there is generally a diminution in the quantity of fibrin, and never exhibits the buffy coat unless there is accompanying inflammation.

Causes = Of the etiology of Enteric fever very little is known. Age seems to have something to do with this disease, for it is very rarely if ever seen in

persons beyond fifty years of age; and when it does attack persons far advanced in life it is very apt to prove fatal. It is also very fatal when it occurs among children; it is said by some authors to occur very rarely among children: Dr Power thinks that the diarrhea or cholera infantum that rages among children in the Summer season, is most always Enteric fever. Men as a general rule are more liable to have this disease than women: but this is probably owing to the fact that men are more exposed to the predisposing causes than women. Locality has something to do with the causes of this affection; for this disease occurs more frequently in large cities than in towns or country localities. In cities it is seen most frequently in the lower classes of life, who live in narrow and ill ventilated streets or alleys: it also occurs very frequently on board of ships, and in hospitals when persons are crowded together and living upon unwholsome food. This disease

sometimes occurs epidemically in cities. An epidemic of this disease, prevailed to a very great extent in our own city during the past winter. Enteric fever occurs very seldom in Malarious districts, it does however sometimes exist sporadically, this fact is sufficient to prove that this disease is not produced by Malaria alone, but requires the presence of some other poison, as the decomposition of animal matter. Enteric fever is not contagious it is well enough however to caution persons living with the patient, not to go where the patient is any more than is necessary.-

Diagnosis= There is no one pathognomonic symptom of Enteric fever, and it is only by grouping several symptoms together, that we can make up our diagnosis. For instance we take into consideration, the epistaxis, diarrhoea; great muscular debility, dulness and confusion of intellect, headache passing gradually into delirium; restlessness, vigilance, subsultus tendinum

picking at the bed clothes, ringing or buzzing in the ears; the appearance of the rosy eruption and by thus grouping the symptoms together, we cannot fail to make a correct diagnosis. There is sometimes in the commencement of this disease some difficulty in distinguishing it from Remittent fever, but after the elapse of a day or two there will be no difficulty; the well marked remission and bilious vomiting, is sufficient to ensure us that the disease is not Enteric fever; whereas the epistaxis, diarrhoea and rosy eruption is sufficient to establish a correct diagnosis of the latter. Enteric fever may also be confounded with Typhus fever, there is however a well marked difference between the two diseases; the patient is not so often insensible in the commencement of Typhus as in Enteric fever; diarrhoea is almost always an accompanying symptom of Enteric fever, whereas in Typhus the bowels are constipated. The eruption of the two diseases also differs very materially from one another.

In Enteric fever the spots are paler and disappear under pressure; in Typhus the petechial eruption makes its appearance earlier, and are darker in colour, not elevated as in Enteric fever, nor do they disappear under pressure. The countenance differs in the two diseases, in Typhus the face is darker, the conjunctiva injected. Hydrophobia is very seldom present in Typhus fever, whereas in Enteric fever it is never absent. The anatomical lesions of the two diseases are different; the never absent alteration of the glands of Peyer & Brunner in Enteric fever, are never seen in Typhus, this single difference is sufficient for us to determine, whether the case was Enteric or Typhus fever.

Prognosis = The prognosis in this disease is always discouraging, even in the milder forms of the complaint. The danger is in all cases proportionate to the age of the patient, being certainly far more greater in the old than in the young. Sex appears to exercise but little

influence over the mortality of the malady. It is always necessary in forming our prognosis to take into consideration the constitutional power of the patient. A feeble constitution is always unfavorable; nevertheless we sometimes see the robust very rapidly cut off by the fever. The more rapidly the disease passes through its different stages, the more apt is it to terminate fatally. The character of the local symptoms affords us a useful means of forming a correct prognosis; for instance, the predominance of cerebral symptoms discloses the existence of a dangerous form of the disease. I have noticed in the cases that I have seen prove fatal, that delirium occurring early in this disease is more dangerous than when it happens later. When the tongue becomes brown or black the disease in a majority of instances terminates fatally. When on the contrary the tongue remains moist or is but little altered; or having become dry, it again becomes moist, it is either a sign of amendement, or indicates a

mild form of the fever. Constant diarrhoea is also an unfavourable symptom. The pulse when over 120 ought not to be slightly regarded especially in the latter stages of the disease, it is a bad thing for a patient to recover when the pulse is over or has reached 140. The occurrence of gangrenous sloughs on the sacrum or on any part of the body upon which the patient has laid for sometime, renders the prognosis grave. The occurrence of parotitis is an unfavourable symptom. I have spoken of=.

Treatment=. There is no positive treatment for this disease, no antidote; it has a course of its own which it will run, and which we cannot cut short: we can to a certain limit manage the disease. In treating this fever we should be careful not to do too much for the patient, and there is not the slightest doubt but that, the "Vis medicatrix" has in many instances caused the disease to terminate fatal, which would if it had of been left to time and nature terminated favourably

We should always remember in treating this and all other diseases the advice of good old Hippocrates that there are two things to be considered: first, "that we do the patient good; secondly, that at least we do him no harm." There is probably no disease that has so many various modes of treatment as Enteric fever. I shall not undertake to describe the treatment recommended by different authors, but shall speak of that treatment which I have seen and known to have acted most beneficially in the management of this disease. Enteric fever when it has been fairly recognised, venesection may be resorted to with the happiest effect; but this bleeding should always be resorted to before the disease has passed beyond the third day: after this time it will prove injurious. This blood letting if resorted to early will not unfrequently shorten the duration of the disease; we should never take more than from ten to twelve ounces. To aid our

bleeding we should keep the patient upon very low diet; give him cooling drinks. When there is tenderness of the abdomen a few cups or leeches may be applied. The patients bowels should be kept gently open. Drastic purgatives should never be given in this affection as they are very apt to give rise to an obstinate if not fatal diarrhoea. We may give our patients a small dose of the Salts, Magnesia or Rochelle salts, or if there is much existing irritation of the alimentary canal we may give a dose of Castor Oil to open the bowels. If the patients bowels are not moved once every twenty four hours we should give some mild aperient; for this purpose we may give a small dose of Rochelle salts, or a little Magnesia and Rhubarb. If the stomach is irritable and cathartic medicines cannot be taken, the same object may be accomplished by enemata; they should be of a mild character in the

commencement of the disease; when however the disease is farther advanced and the abdomen is tympanitic, we may combine the oil of turpentine with the enema. The state of the bowels having been attended to, we should now endeavour to check the febrile symptoms; to accomplish this we should give the patient refrigerant diaphoretics; the best agents for this purpose are, acidulated drinks well iced, or the effervescing draught; or we employ the non purgative salts. Chlorate of Potassa & Bicarbonate of Soda. Cold ablutions are very useful in abating the heat of surface. The legs, arms and temples should be frequently sponged with cold water, and when there is general heat of the whole body the sponging may be extended to the whole surface. In cases attended with great debility, we may sponge the body with diluted spirit. When the patient complains of severe headache a few cups or

leeches and blisters of powdered ice may be applied to the head. In the latter stages of the disease, when collapse or sinking comes on, stimulants should be given: for this purpose when the pulse is frequent and small, we may give the Carbonate of Ammonia, brandy or the oil of turpentine in doses of ten or fifteen drops every hour. This agent acts both as stimulant and as an alterative surfaces of the intestinal mucous membrane. Blisters should never be resorted to if it can be possibly avoided, for they are very apt to produce sloughing. Mustard sinapisms should be placed upon the extremities, inside of the thighs. When the debility in the latter part of the disease is very great, we should then give tonics & stimulants combined, as the Salts of Quinine and Serpentaria or Quinine & Oil of turpentine. In giving tonics & stimulants we should always be governed by the state of the pulse: if the pulse becomes more frequent

and delirium increases they should be abandoned; but if on the contrary the pulse becomes full, the skin relaxed, delirium diminished they may be considered as acting favourably.

Treatment of the complications that occur during the progress of the disease ——

The patients apartment should be well ventilated, let him have a plenty of fresh air. The sordes that collect upon the patients teeth and lips should be removed; as a wash for this purpose, we may make use of Flaxseed tea or a solution of Borate of Soda. If diarrhoea is profuse it should be checked by an enema of Flaxseed tea and Tinct Opii, or give eight or ten drops of Acetum Opii by the mouth, or some tonic astringent. When the disease assumes the bilious type we should give the patient an emetic cathartic, and treat symptoms as they arise. Meteorism which exists during the progress of the disease, owing to the accumulation

of gas in the intestines has no tendency to pass away although there may be diarrhoea; for this distended state of the abdomen we should give the a teaspoonful of a solution of Muriate of Soda well iced; or an ounce of Rochelle Salts ℥ss. and direct friction to the Iliac over the abdomen.— When perforation takes place the patient has scarcely any chance of recovery, all that we can do, is to place the patient upon his back, allowing him neither food or drink, and keeping him on the verge of narcotism by means of Opium.——— Epistaxis when profuse should be treated with cold lotions to the nose and back of the neck and astringent injections; when this means fail to check the hemorrhage the anterior and posterior nares should be plugged. Intestinal hemorrhage sometimes occurs during the progress of the disease for the purpose of controlling it give

some astringent, as the Acetate of Lead and Opium combined in the proportion of three grains of the Acetate of Lead and a half a grain of Opium, or we may give ten or fifteen drops of the Muriated Tinct of Iron. More than one half of the patients who are attacked by this hemorrhage die. — When there is great cerebral disturbance with a flushed face &c. apply cups or leeches to the temples and back of neck, shave the head and apply blisters of powdered ice. When there is profound coma. blisters should be applied to the inside of the thighs. We should be very careful how we use blisters as very troublesome sloughs are very often caused by their application. — In the low tumultuous stercoraceous delirium we should administer stimulants as Camphor Julep, wine whey or the Salts of Quinine and Oil of Turpentine in small doses frequently repeated. When we come to examine

the lungs after death, we generally see congestion of the posterior portion of the lungs. This congestion is caused by the patients lying constantly upon his back; to prevent this we direct the patient to change his position in bed. If bronchitis or pneumonia supervene, the treatment for these should be resorted to. Particular attention should be paid to the condition of the patients bladder, if there is retention of urine it should drawn off. To prevent the formation of bed sores, the patients position in bed should be frequently changed and pillows should be placed under him to prevent the severe pressure upon those parts, that bed sores are most liable to occur: those parts of the body upon which the patient rests should be washed with some stimulating application, brandy & water is a good application; if the parts look red and inflammed, strips of adhesive

or lead plaster should be applied over them. or if they are too far advanced for these remedies and sloughing is about to take place, apply lightbread or carrot poultices to them. ——————

Enteric fever is treated by some practitioners with mercury and of which mode of treatment I have said nothing about, for in the few cases in which I have seen it given, it never was productive of the slightest benefit to the patient but was on the contrary injurious. I shall therefore say nothing more regard to its administration in this disease, except that it is an agent that I should not resort to in the treatment of this affection. ——————

The period of convalescence requires a close watchfulness on the part of the physician. The bowels should be kept daily open by the mildest laxatives or enemata. The appetite is most always very great and we should be very particular about the patients diet;

allowing himself first to partake of those articles of food that are very digestible, and not liable to irritate the alimentary canal.—

Sequelae.— The most dangerous sequel of Enteric fever is tubercular consumption, and in patients of Scrofulous habit, it not unfrequently follows very soon after the fever. Another very common sequel is severe pains of one or both legs coming on after convalescence; sometimes there is perfect paralysis of the extremities. Chronic Gastritis is sometimes brought on from imprudence in diet. Such are the most common sequelae of Enteric fever.

W. H. M.

An Inaugural Dissertation
on
Acute articular Rheumatism,
Submitted to the Examination of the
Provost, Regents, & Faculty of Physic
of the
University of Maryland
for the degree of
Doctor of Medicine
by
Thomas A. Carrico
of Maryland,
Feb. 1848.

An eminent writer speaking of the study of medical science says, "observation is a polar star, - hypothesis an ignis fatuus."

Impressed with the truth of this remark, I shall not attempt to advance any new doctrines, and thus waste my reader's time with idle theories, and mere speculations. But, I will endeavour to collect with care those practical truths and principles, which seem to me to be based on facts, and supported by experience. Whilst I thus state the plan I propose to pursue, in writing this my first essay, I acknowledge myself deeply sensible, that its execution will bear no proportion to the importance of it's subject. I do, however, sincerely trust, that the opinions I shall here advance and approve of, will be found agreeable to the practice and experience of my respected teachers.

In selecting rheumatism from the almost bewildering records of human maladies, as the subject of my dissertation, my sole object is, to familiarize myself with its nature, the actual phenomena it presents, and the power exerted over it by therapeutical agents. Rheumatism has long been known to the medical world; and is, one of the most common and painful diseases with which we are acquainted.

What then is rheumatism? I may venture to define it thus— It is a constitutional affection, marked by a peculiar metastatic tendency, having its anatomical seat in the muscular and fibrous tissues. Dr. Wood believes that it effects all the tissues, even the mucous. I have no difficulty in understanding how other tissues may be affected secondarily— by contiguous sympathy; but I believe that rheumatism has its seat in the muscular and fibrous tissues alone, or, in those tissues which so much resemble the fibrous in structure and function,

that they may physiologically be considered one and the same tissue. I do not propose to treat of the various forms of rheumatism; but of what is called acute articular rheumatism. This affection (as the name implies) is seated in the structure of the joints. The disease seems to have an election for the large articulations, as the knees, hips, wrists, and shoulders. It also appears that the joints of the inferior extremities are oftener its seat, than those of the superior. Acute articular rheumatism presents many of the elements of inflamation, as pain, heat, redness, and swelling. Yet it is something more than common inflamation. It differs from ordinary inflamation in its peculiar metastatic tendency; in not being followed by the common events of inflamation; and in the fact, that very frequently the antiphlogistic regimen exerts no controle over the disease at all. Though a most painful and distressing affection, it seldom of itself compromises life.

It proves fatal only by its complications, and generally after a long period of time. The disease is sometimes ushered in suddenly, though generally there are some prodromic symptoms for several days previous to an attack, both in the system at large and locally.
A person about to suffer an attack, has general contusion pains — feels as if he was bruised; his joints feel stiff, and are sometimes a little tender. The digestive organs are disturbed, and there is some degree of feverish irritation. In short, he has a sensation of malaise and general discomfort. After these morbid sensations have existed for a longer or shorter time, the patient is seized with a chill more or less severe, which is followed by decided febrile movement. The face becomes flushed: there is cephalagia, and at the same time intense and agonizing pain occurs in one or more of the large joints. The pain varies greatly in intensity. It is sometimes likened

to the cut of a sharp instrument; again, the patient says his joint feels as if some one was boring a gimlet into it. So intense is the pain sometimes, that the most courageous and stout-hearted man cannot withstand its violence; but makes use of almost every expression characteristic of suffering. There is extreme tenderness about the joint upon pressure, and the patient cannot move the limb; not that he has not the power - not that the limb is paralized; but because of the excruciating agony the slightest motion in the joint occasions. Redness, heat and tumefaction soon follow. When the pain is sharp and lancinating, it is said, generally to be relieved by the swelling. In some cases the tumefaction is tense and elastic: in others it is more downy to the feel. The joint is of a rosey-red hue, which gradually fades into the natural colour. When the hips or shoulders are attacked, there is seldom

either redness or swelling, owing to the voluminous muscles there situate; but in all other articulations these symptoms are generally present. When the disease begins in a single joint, it soon extends to others. For instance, if the knee be its seat at the onset of an attack, it quickly extends to the hip, shoulder, or elbow. Sometimes after extending to other joints, it leaves the first attacked entirely free from suffering. Again, the same joint is liable to be several times assailed before the disease ends. Sometimes it seizes upon the muscles in the neighbourhood, and occasionally the whole limb becomes more or less swollen and tender. Within comparatively recent date, some very interesting and important facts have been made out concerning rheumatism as it occurs in the articulations; and accordingly it has been distinguished into fibrous and synovial rheumatism.

The distinctive characters of the two varieties are these. In the fibrous form, the inflammation commences in the immediate vicinity of the joint in the ligaments, tendons, and fascia - with severe pain. The synovial membrane is not affected. There is very little redness or tumefaction at first; but after the pain has lasted for some time, the parts around the joint become puffy, from the simple afflux of fluids to the seat of irritation. The swelling pits on pressure; and the redness is sometimes disposed of in streaks - follows the course of the tendons.

It is in this variety that the peculiar metastatic tendency shows itself. The fever generally runs high; the tongue is always covered with a thick white fur: the pulse is full and bounding: the skin is hot, but is bathed with profuse acid perspirations, which exhaust the patient's strength, without affording him any relief. There is total

loss of appetite: the urine is scanty, and lets fall a copious lateritious deposit. In the synovial form, which shows itself more frequently and obviously in the knee than in any other joint, there is no tendency to migration; the pain does not last long before there is some tumefaction, and in most cases, slight diffused redness of the skin. The swelling is owing to effusion into the cavity of the joint, and is tense and elastic. Fluctuation can generally be felt in the spaces that intervene between the tendons and ligaments if the hand be applied to the joint. The fever is either less from the beginning, or soon moderates upon the supervention of tumefaction; the tongue is less foul, and the perspirations are not so profuse. The latter is much more rebellious to treatment, and does not bear depletion so well; it is tenacious of its hold, and is apt to leave the patient weak and exhausted. In the predisposed

it not unfrequently lays the foundation for white swelling, and anchylosis often follows as a consequence of the disease. In the former there is more headache, and frequently insomnolence from the agonizing pain. The fever is generally in direct ratio to the number of joints affected. The blood is always buffed and cupped throughout the disease. The patient generally lies on his back, and is fixed in that position, because of the excessive suffering the least movement causes. The disease is very uncertain in its progress. When all the appearances of inflamation are reduced, and every thing seems to augur favorably for the recovery of the patient, the disease frequently returns with all its pristine violence. There is great tendency to a relapse upon the slightest exposure, or change of weather. By proper medical and hygienic management, the disease may

frequently be arrested in eight or ten days; but at times it runs on for months, and is apt to assume the chronic form, when it may last for years, or even during the rest of the unhappy patients life. Its ordinary duration under tolerable management is about twenty days. Frequently however under any treatment it proves very obstinate. The decline is marked by the diminution or total subsidence of pain first; then the joint begins to lose its redness, the parts become soft, and gradually the swelling subsides. Generally the fever and exalted nervous sensibility decline with the local symtoms; yet this is by no means always the case. Often considerable degree of pyrexia remains after the obvious inflamation of the joint has subsided. Some have attributed the continuance of this febrile movement to rheumatic inflamation

of the inner coat of the arteries. When the local disturbance does not subside with the constitutional, it generally runs down into the chronic form, often producing permanent structural changes in the joints and great ~~great~~ distortion of the limbs.

In the lesions of rheumatism we find nothing to account either for its obstinate character, or why it should cause so much general distress and suffering. The cellular tissue in the vicinity of the joint is generally more dense than natural, and sometimes albuminous deposits have been noticed in it, or serum more or less bloody. The fibrous structures have been found thickened and slightly injected. The synovial membrane is sometimes drier than natural; sometimes red and thickened; the quantity of fluid in the cavity of the joint is sometimes lessened, sometimes increased, and having flocculi of unorganized lymph floating

in it. The muscles of the limb are generally pale and atrophied, in consequence of the state of condemned inaction, which they have undergone. The organs, which may be complicated during an attack, present the effects of ordinary inflamation.

In some rare cases the lining coat of the arteries has shown signs of inflamitory action. In certain cases during the course of the disease, metastasis to the membranes of the brain takes place, evidenced by headache, increased sensibility to light and sound; delirium, and coma; and occasionally this meningitis thus set up proves suddenly fatal.

Dr. Watson thinks true transfer to the brain is very rare; that in most of the cases where the brain is suspected, the heart is the only diseased organ; and that the symptoms shown on the part of the brain are caused entirely by the

cardiac complication. Metastasis to the pleura and liver occasionally takes place; but by far the most common and dangerous complication is, cardiac rheumatism.

Bouillaud was the first to notice the frequent occurence of cardiac inflamation in acute articular rheumatism.

The heart is regarded by some as a large and involuntary joint, and it has been ascertained by carefull observation that it is affected in rheumatism as often as any one single articulation of the body. When inflamation seizes upon the heart it is more tenacious, and yields less to remedies, because, probably, of the continual motion of the organ. Bouillaud thought the heart was attacked in one half of the whole number of cases of acute articular rheumatism; but this certainly is too large a proportion.

According to Prof. Rogers's experience, about one case in eight present signs of cardiac complication. No case of acute fibrous rheumatism is exempt from the danger of this metastasis.

When in the course of an attack, we find the patient with difficult or hurried respiration, without or with cough, increased frequency of pulse, palpitation with pain and oppression in the precordial region, a peculiar, anxious, and distressed expression of countenance, we may strongly suspect the cardiac affection. This transfer generally takes place at night, and may want ~~want~~ all of the above symptoms.

Hence the necessity of closely watching our patient, and looking out from day to day for the first appearance of physical signs. This migration may take place at any time of the attack.

Endocarditis is said to occur much more frequently than pericarditis. The latter is more immediately dangerous; the former more apt to leave behind it the most unpleasant effects: as chronic valvular disease, sooner or later followed by hypertrophy and dilatation, and ultimately death. In pericarditis, when it does not prove suddenly fatal, recovery takes place by the agglutination of the surfaces of the pericardium. As soon as we ascertain by any means the existence of this complication, the most vigorous and active treatment should at once be enforced.

Cold is the only known exciting cause of rheumatism. Moisture greatly increases its power. It acts most energetically during perspiration, and therefore fatigue and exertion predispose to it by opening the pores of the skin.

Sleeping in damp bed-clothes, living in dark and damp apartments, getting wet without subsequently changing the dress, are instances of the kind of exposure likely to be followed by an attack of the disease. Rheumatism occurs in every climate; but is much more prevalent in those situations, where there are frequent and sudden changes of weather. It is most frequent in winter and spring; yet cold and moisture alone will not produce the disease. There must be a peculiar condition of the system predisposing to it; the rheumatic diathesis must exist. This diathesis seems to be hereditary in one half of the whole number of cases. In what this condition consists is wholly unknown. It certainly is greatly affected by age, children under ten years rarely being attacked by acute rheumatism.

More men than women are attacked by the disease, because their occupations expose them oftener to the exciting cause of rheumatism. It is most apt to attack between the ages of fifteen and thirty-five.

"The diathesis when strong is sufficient of itself to produce the disease without any exciting cause". - Wood's Pract. Med: -

The diagnosis in acute, frank forms of this disease is generally very easy. The only affection with which it is likely to be confounded is gout. In well marked cases no difficulty can arise; but cases do occur in which it is very hard, if not impossible, to make out whether we have gout or rheumatism to deal with; indeed, we have good grounds for believing the two diseases not unfrequently coexist in the same individual. Gout almost never attacks persons under puberty. It is a disease of the wealthy, and has

for its exciting causes, idleness, luxury, and indulgence in the pleasures of the table. Rheumatism most frequently occurs in the very opposite walks of life: in laboring men, who are subjected to every vicissitude of weather, and frequently in want of the necessary comforts of life. Gout attacks by preference the small joints; the pain is more violent; the redness is brighter, and there is more tumefaction; finally in gout desquamation takes place.

The prognosis is not very grave; but always serious, especially in the fibrous form, when there is such a tendency to metastasis. When the disease shows a disposition to become subacute or chronic, the prognosis ought always to be very guarded, because of the great liability of structural changes taking place in the joints, rendering the patient

a cripple for life. In children it is always bad, from the fact that the heart is generally complicated, and when so life is almost necessarily compromised.

The great majority of cases of rheumatism, no internal metastasis occurring, may be conducted to a happy termination. Of the complications the cerebral is the most fatal, though fortunately of comparative infrequency. Dr. Wood thinks the dangers of the heart affection have been greatly exaggerated by recent practical writers. In his practice, only one case of fatal affection of the heart, either during, or subsequent to the rheumatic attack, occurred in adults when he saw the case early.

Of the real nature of rheumatism, very little has been made out that is satisfactory or conclusive. Some very eminent and observing practitioners

ascribe all its peculiarities to the abnormal presence of acid in the circulating mass. According to Dr. Prout, it is the lactic acid. Dr. Thomas. H. Buckler of this city thinks that uric acid exists in too great abundance in the system.

Others, and equally distinguished observers, think rheumatism nothing more than common inflammation, and attribute all its peculiarities to the character of the tissue in which it is seated. But that rheumatic differs essentially from common inflamation, is shown by its migratory tendency, and the almost entire absence of any tendency to suppuration even in its most violent forms. Again, rheumatism is not necessarily inflamatory, and any explanation which does not include all its well ascertained varieties, is wholly untenable. We do know however, that it is a peculiar affection;

that it owes its peculiarity to a certain morbid condition of the system, called rheumatic diathesis, which never as yet has been satisfactorily explained.

In few diseases have more exclusive plans of treatment been recommended than in rheumatism. Bouillaud submits all of his patients to a regular course of daily depletion, both general and topical. He bleeds them to utter prostration. Ugly delirium not unfrequently supervenes upon this heroic treatment, and convalescence is always long and tedious. Yet venesection is not to be despised in this disease. We must bleed, not as an absolute means, but to moderate the excitement of the system. When the pulse is full and strong, and there is a considerable amount of local inflammation, shown by tumefaction,

heat, redness, and tension of the parts around the joint, we should draw blood in proportion to the strength of the patient and the resistence of the pulse. Under these circumstances the operation is usually well borne. One or two venesections are ordinarily sufficient in this disease. The quantity of blood necessary to be taken at any one time must be decided by the practitioner's clinical skill and judgement. From twelve to sixteen ounces are generally enough. As soon as the pulse begins to flag, the orifice should be closed; syncope should never be induced.

I say we must use venesection not as an absolute means of treatment; for though it sometimes seems to cut short an attack, yet experience has shown us, that often not the slightest benefit results from its rigorous employment.

In anemic and debilitated subjects, or in mild cases it should not be used, unless some very urgent necessity demands it. The local abstraction of blood by cups or leeches is of no use in the acute fibrous forms; but in the synovial where the disease is fixed, then topical depletion is of the greatest benefit. We should however, in every case reserve as much of our patients strength as possible to meet complications.

After bloodletting we should give an active purgative to rid the bowels of whatever may be irritating, and at the same time to act as a depletive. For this purpose a strong black dose may be given. A very common practice with many (and I believe a very good one) is, to give ten or fifteen grains of calomel with one

of opium at night, and follow it up by a dose of sulphate of magnesia in the morning. The pain seems to be caused in great measure by the exalted sensibility of the nervous system, and opium in some form is strongly called for. Colchicum has been greatly lauded as a remedy in rheumatism; and indeed sometimes it does exert a most happy influence. Twenty or thirty drops of the wine may be given two or three times a day. Some treat the disease with Dover's powder alone. This often acts very beneficially, and may be given in five or ten grain doses two or three times a day.

Another plan highly recommended by many practitioners, is, tartar emetic in contrastimulant doses. Small doses, sufficient only to nauseate, may very often be combined with other means

with good effect. But as a sole means, as an absolute means of treatment, I should be slow to recommend this plan. Magendie avers that the fibrin was always too abundant in this disease, and that alkalies had a tendency to overcome the coagulability of blood out of the system, recommended what is called the alkaline plan of treatment. Many after venesection accordingly, trust wholly to the preparations of potassa and ammonia. Dr. J. H. Buckler of this city speaks very favorably of the phosphate of ammonia. In Germany the nitrate of potassa is almost exclusively used. M. Briquet used sulphate of quinia in very large quantities in the treatment of rheumatism, and with good success; but this remedy is only beneficial or safe

in my opinion, during convalescence, or when the system is much broken down by the disease.

"Now seeing men's opinions so unsettled concerning the treatment of so common a disease — says Doctor Watson — we may be sure that it is not always docile to any mode of treatment". Dr. Elliotson strongly recommends the use of cold applications to the joint; but this is a hazardous means. Though often very grateful to the patient, yet we run great risk of driving the disease to the brain, or heart. We may apply warm fomentations, or warm spirits of camphor and laudanum to soothe the pain; or the joint may be enveloped with a pad of soft cotton. We must then, manage our patient, and not attempt to cut short the disease by any of the

so called specific plans; for this affection seems to have a certain course of its own which it will run.

Should metastasis to the brain or heart take place, we must boldly and vigorously use depletion general and topical, blisters, and cold applications; and the system should be brought as speedily as possible under the influence of mercury.

During convalescence, great care must be taken that the patient avoid all exposure to cold. He must wear flannel next the skin from neck to foot: he must guard against the dangers of sudden changes of weather. If the convalescence be tardy, or the constitution much broken down, it will be necessary to resort to some of the martial tonics, sulphate of quinia, the cold infusion of bark.

These then are the means to which we must have recourse; and very frequently we will find our best directed efforts fail.

Here ends my task — though aware that many will be found its errors and inconsistencies, yet it is a gratification for me to know, my efforts have been well directed, if I have failed in its performance. In conclusion then, to you the faculty, sensible of the immense debt of gratitude I owe you for the many kind favors received at your hands, may I take the liberty to hope that, my name may soon be enrolled with yours, as a compagnon de voyage, upon the high-road of science where it will ever be my pride and pleasure to travel.

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